

Semantic verb classes in Tima (Niger-Congo)

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Abstract

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This study represents a linguistic analysis of verbs in Tima, a Niger-Congo language spoken in Sudan. The aim is to establish coherent semantic classes of verbs based on their common morphosyntactic behavior, the underlying hypothesis being that the commonalities in the morphosyntactic behavior may be accounted for by common semantic components shared by verbs that behave similarly. The participation of verbs in valency-changing operations is taken as a pattern of common morphosyntactic behavior. Valence and, concomitantly, argument structure alteration is signaled in Tima by the employment of derivational suffixes. Extension by particular derivational suffixes is available to particular groups of verbs, i.e. the productivity of a given derivational morpheme is restricted by the lexical semantics of verbal roots. Tima has a rich derivational morphology, particularly in its postverbal elements (affixes and clitics). Yet two suffixes are most relevant in terms of valency-changing operations in that they show specific compatibility constraints and depend on the meaning of the verb. The distribution of these two suffixes, *-ak/-ak*, which is used in detransitivizing constructions, and *-Vk*, which can serve in both intransitivizing and transativizing functions, is the major concern of the present dissertation. Both morphemes are multifunctional; their specific reading depends on the semantic class of the verb extended by the suffix.

The dissertation is structured around these two morphemes and their distribution with regard to the Tima verbal lexicon. The general background, including theoretical issues and general linguistic information on the Tima language, is presented in Chapter 1. Chapters 2 and 3 describe the functional scope tied to the verbal semantics of the morphemes *-ak/-ak* and *-Vk*, respectively.

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Abbreviations

1	first person
2	second person
3	third person
A	agent-like argument of canonical transitive verb
ACC	accusative
AP	antipassive
APPL	applicative
ATEL	atelic
BEN	beneficiary
CAUS	causative
COM	comitative
CONJ	conjunction
DAT	dative
DEF	definite
DEM	demonstrative
DIST	distant
DO	direct object
EP	epenthetic vowel
ERG	ergative
EXCL	exclusive
FOC	focus
FUT	future tense
GEN	genitive
H	high tone
HT	high transitivity
IMP	imperative
IPFV	imperfective
INCL	inclusive
INS	instrumental
INTR	intransitive
IO	indirect object
L	low tone

LOC	locative
M	masculine
MID	middle
N	neuter
NEG	negation
NOM	nominative
O	object
OPT	optative
P	patient-like argument of canonical transitive verb
P	person
PERF	perfect
PFV	perfective
PL	plural
PLUR	pluractional
POT	potential
PREF	prefix
PRON	pronoun
PROX	proximate
PST	past
REC	reciprocal
REFL	reflexive
RES	resultative
S	subject
SG	singular
STAT	stative
TEL	telic
TR	transitive
V	verb
VEN	ventive

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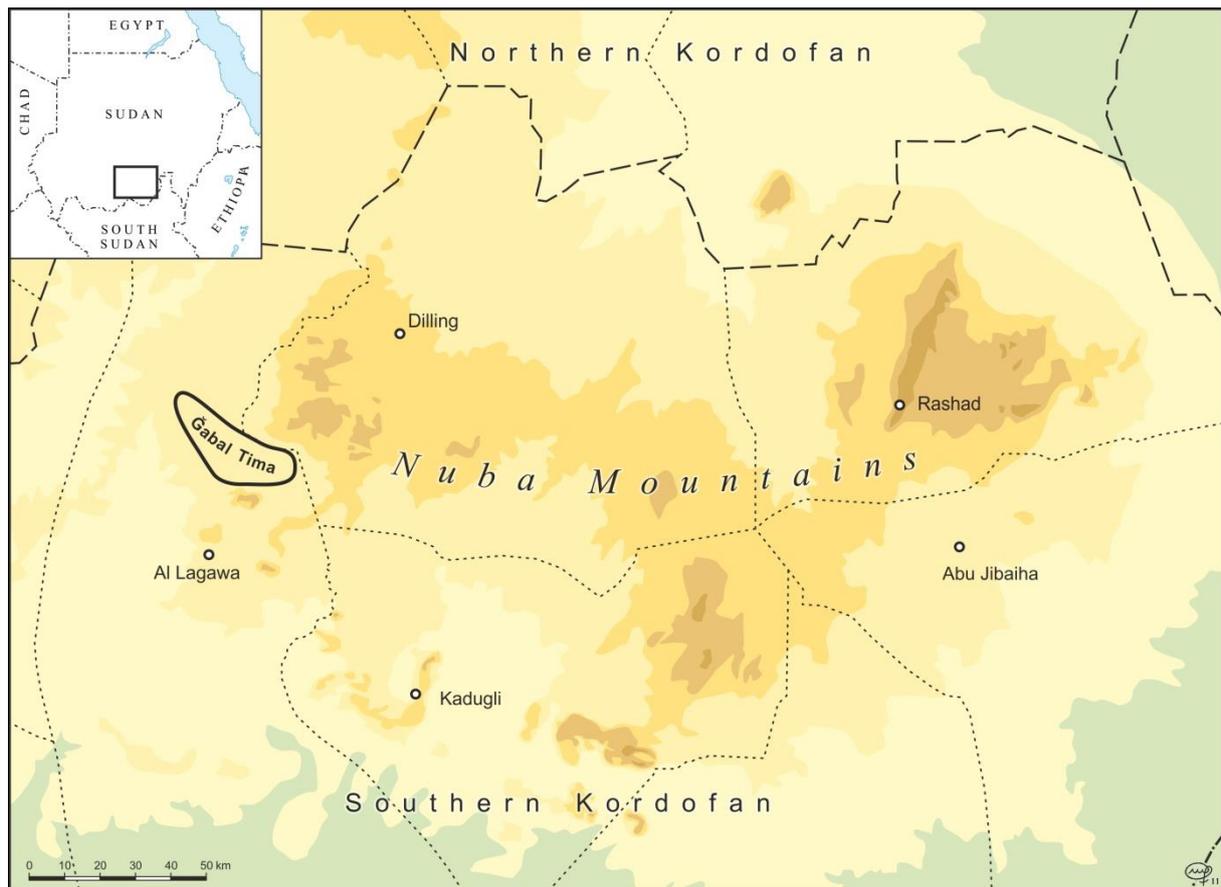
1. General background information

In this introductory chapter, general and relevant information on Tima language is provided, including information on structural properties referred to throughout the linguistic analysis that follows. Also introduced here are the theoretical approaches and concepts to which I appeal in the analytical part of the dissertation. For the convenience of the reader, the following structure has been chosen. First, section 1.1 provides general information on the linguistic situation and includes materials on the genetic affiliation and the geography of Tima, as well as on previous and continuing linguistic investigations of the Tima language. Section 1.2 then provides a theoretical background to the linguistic description in the analytical part (i.e. Chapters 2 and 3). Section 1.3 gives an outline of the structural properties of Tima necessary for an understanding of the data presented (already using the terminology introduced in 1.2 hence this structural order). The materials and methodology employed by the study are described in section 1.4.

1.1 The Tima language and its speakers

Tima is a language of the Niger-Congo family spoken in the Nuba mountains in Sudan. The name Tima is an ethnonym used by other communities also living in the Nuba Mountains, as well as by neighbouring Arabic communities. It is assumed that the name Tima goes back to the name of one of the villages where this language is spoken (*ṭiml*). As documented by Meerpohl (2012: 19), “[i]n their [Tima] opinion, the expression “Tima” originates from the name of a person that was called Thiime (*ṭiimè*).” Some neighboring groups use the names *Tamanik* or *Yibwa* in reference to the same community. The Tima themselves call their language *ṭàmáá dùmùrík* (lit. ‘language/talk like Tima’), an individual is referred to as *kùmúrík* (singular) ‘a Tima person’, and the collective name is *imúrík* (plural) ‘Tima people’. The area where they live is called *lúmúrík* ‘the land of the Tima’ by the Tima people. Figure 1 shows the geographical location of the Tima community (from Meerpohl 2012: 20).

Figure 1. Map representing the location of the Tima community in the Nuba Mountains (western side)



As summarized by Dimmendaal (2009), the earliest linguistic accounts of Tima are contained in Meinhof (1917–1918), Heinitz (1917), and Macdiarmid and Macdiarmid (1931); Stevenson (unpublished doctoral dissertation; see also Stevenson 1956-1957) is the earliest source that classifies Tima, together with another language Katla, as forming a single genetic unit (an isolated group called Katla).

Later, Greenberg (1963) describes Tima and Katla as forming the Katloid subgroup – one of the five subgroups within the Kordofanian branch of Niger-Kordofanian (renamed as Niger-Congo by Williamson (1989); see Dimmendaal (2009: 331)). Schadeberg (1981, 1989) likewise considers Tima to be a part of the Katla cluster (consisting of three languages, Tima, Katla, and Julut) within the Kordofanian branch of Niger-Congo. The Kordofanian branch includes four language groups, according to Schadeberg (1989): Katla, Rashad, Heiban, and Talodi. However, Dimmendaal (2009, 2018), based on a detailed comparative analysis of the languages in question, concludes that there is not sufficient linguistic evidence for a genetic link between the Katloid-Rashad subgroup, on the one hand, and the Heiban-Talodi, on the other, making it difficult for them to be regarded as a genetic unit. That is, the author (ibid.) doubts the existence of the Kordofanian genetic unit of languages and regards the Katla cluster (Tima, Katla, and

Julut) as forming a separate genetic subgroup together with the Rashad cluster that, in turn, can be linked to the Benue-Congo branch of the Niger-Congo. To summarize the problem of the genetic affiliation of Tima, we can state that while the genetic grouping of the three languages forming the Katla group (Tima, Katla, and Julut) is uncontroversial, the affiliation of this grouping within the larger genetic unit remains a matter of debate.¹

The estimated number of Tima native speakers amounts to some 7000 people in the Nuba Mountains in Sudan; a further approximate 1000 Tima people live in the Sudanese capital, Khartoum (Meerpohl 2012: 24). The ethnic group of the Tima is one of the smaller societies in the region; they live on the western side of the mountains (Meerpohl 2012: 17).

Tima is a highly endangered language; the rapid spreading of the Arabic language as an official language and lingua franca in the region is considered one of the major factors in its endangerment (see Dimmendaal 2015). As reported by Meerpohl (2012), who conducted a sociological and anthropological survey in the Tima community, the shift to Arabic can be observed in daily conversations even among older members of the Tima community, who switch between Tima and Arabic. During my fieldwork in Khartoum in 2019 and 2020, I also observed that Tima speakers quite often use Arabic grammatic elements attached to Tima words, in addition to the expansive usage of Arabic words within Tima sentences. Dimmendaal (2015) names, among the main reasons for the endangerment of the Tima language, the disadvantaged economic situation of the Tima community, which requires community members to speak Arabic in order to gain “social and economic reward” (Dimmendaal 2015: 43), i.e. to get access to better-paid jobs. The author also mentions the concern of many parents that “teaching in a local language (i.e. Tima) at the primary level constitutes a barrier for social mobility” (ibid.), meaning that using Arabic might be encouraged more than using Tima.

Aside from this factor, linked to the “instrumental” (in terms of practical usefulness) role of language (as defined by Dimmendaal 2015: 43), one further drawback hindering a successful language transmission process is teachers’ lack of didactic experience in teaching reading and writing in local languages, an enterprise that requires a lot of administrative support (which unfortunately is also currently lacking).

Despite the unfavorable conditions described, the Tima people are very keen to “maintain and revitalize their language” (Dimmendaal 2015: 39). It is thanks to their deep concern for their

¹ For linguistic accounts of Katla, see Hellwig (2013, 2018, 2019). Various linguistic aspects of Julut are described by Nüsslein (2018, 2020).

language and the proactive position of Tima speakers that the project of documenting the Tima language came into being. As the story goes, in 2003, a Tima spokesman contacted Africanistics Professor Gerrit Dimmendaal in Khartoum (he had a research stay there at the time) and expressed his concern about the possible replacement of Tima with Arabic, which was rapidly spreading as a lingua franca. And it is of course thanks to Professor Dimmendaal who resolved to initiate a comprehensive documentation project.² The documentation of the Tima language was carried out between 2006–2012 (thanks to the financial support of the Volkswagen Foundation).³ Aside from a considerable database of photo and video materials documenting daily life, as well as important socio-cultural events, myths, and stories, the outcomes of the project include a multi-media dictionary (as well as a printed version), linguistic publications on various linguistic and anthropological topics, and three doctoral dissertations: on the phonetic/phonological system by Dr. Abeer Bashir (2010), on nominal and verbal morphology by Dr. Suzan Alamin (2012), and a social anthropological study by Dr. Meike Meerpohl (2012). Furthermore, Gertrud Schneider-Blum has developed three primers for teaching the language in school. Since the completion of the project, the work on Tima has continued and knowledge about different linguistic aspects of Tima have deepened. The present dissertation contains many references to sources that have appeared since 2012, i.e. after the ending of the documentation project.

Importantly, the language committee, consisting of members of the Tima community, actively participated in the working out of the practical orthography used in the encoding of the Tima texts, which again shows their enthusiasm regarding the maintenance and transmission of the language. I would like to use the space here to express my deep hope that the language bearers in world regions as disadvantaged (due to unfortunate historical developments) as that of the Tima people will gain opportunities to work on their own languages equal to those of researchers from better-off countries.

² As Dimmendaal (2015: 40, footnote 1) remarks, it was as a result of a fortunate (!) misunderstanding that the Tima speakers approached him since, actually, it was the Nilo-Saharan language Tama he was interested in at the time, and he was looking for Tama speakers. The Tima speakers believed it was their language, Tima, that Professor Dimmendaal wanted to investigate.

³ The project data can be found at <https://dobes.mpi.nl/projects/tima/>. The PI of the project was Gerrit J. Dimmendaal. Researchers on the team: Abdelrahim Mugaddam, Abeer Bashir, Suzan Alamin, Meike Meerpohl and Gertrud Schneider-Blum. Meikal Mumin and Nico Nassenstein helped with archiving of the data.

1.2 Theoretical background: Approaches, concepts, and terms

The information presented in the sections below is intended to provide a theoretical background for the analytical description of the morphosyntactic behavior of verbs connected to their semantics. The relevant phenomena and the associated terms are introduced to the extent necessary to follow the argumentation in the analytical part of the dissertation; there is no attempt to give a comprehensive overview.

1.2.1 Approaches to verb classification

The present section looks at ways in which semantic verb classification may be approached with reference to well-known examples of verbal classification. Two major well-known projects dealing with verbal classification, both of which have partially inspired the present analysis, will be discussed here. The first is the language-specific classification of the English verbal lexicon (Levin 1993) and the second is the Leipzig Valency Classes Project,⁴ which attempts to arrive at some universal generalizations based on relevant cross-linguistic data.

Levin (1993) provides a large-scale classification of English verbs amounting to several thousand entries. The starting point of grouping together particular verbs is the morphosyntactic behavior shared by these verbs, such as their participation in diathesis alternations, i.e. alternations with regard to argument realization. The hypothesis underlying this undertaking is that verbs showing common behaviors likewise exhibit commonalities in their meaning components. The participation of a certain verb in a particular argument alternation should be generally explainable in terms of the meaning of the verb. The author expresses her approach as follows: “Studies of diathesis alternations show that verbs in English and other languages fall into classes based on shared components of meaning. The class members have in common a range of properties, including the possible expression of certain morphologically related forms” (Levin 1993: 11).

We can identify two key aspects relevant for dividing verbs into classes that can be taken as a basis for verbal classification in other languages: first, the coding inventory of a particular language and, second, the meaning of the verbs. That is, these two properties should be

⁴ See <https://valpal.info/project> for the project description; see also Hartmann et al. (2013).

investigated and brought into correlation in order to establish coherent classes of verbs. The crucial idea of this approach pertains to its predictability potential: on the basis of the verb meaning, or shared meaning components, it should be possible to predict its morphosyntactic behavior (see Rappaport Hovav and Levin 2005: 23). As Levin (2015: 1627) notes, “verb classes prove to be both a means of investigating the organization of the verb lexicon and a means of identifying grammatically relevant elements of meaning.”

The studies following Levin (1993) (e.g. Rappaport Hovav and Levin 1998, 2005, 2010; Levin 2015) have shown the relevance of particular meaning aspects around which verb classes exhibiting parallel patterns of behavior can be accumulated. Moreover, the established criteria have been shown to be relevant for crosslinguistic investigations of verbal behavior as well (see, for example, Levin 2015). The named studies have shown that (nonstative) verbs belong to two large groups in terms of their lexical meaning: manner and result verbs. Significantly, it has been shown that each group is associated with particular patterns of argument realization alternations. In a nutshell, with result verbs, which are change-of-state verbs, the argument undergoing change resulting from the verbally denoted event, i.e. the patient, must be overtly expressed. Moreover, it is predicted of result verbs that in their transitive use, the patient argument must be realized as a direct object, while it is realized as a subject in their intransitive uses (see Levin 2015: 1640; see also Levin and Rappaport Hovav 2011). This finding provides linguists with a testable instrument to apply to individual languages when exploring the participation of result verbs in alternations that are patient-preserving when detransitivized, e.g., anticausative. Manner verbs are likewise expected to exhibit syntactic behaviors particular to this group. For example, only manner verbs, according to the hypothesis, allow alternations where the object (i.e. the patient-like argument) of the base transitive verb is omitted, such as, e.g., antipassive – since for this group of verbs there is no requirement for the patient argument to be realized (Rappaport Hovav and Levin 1998; Wright and Levin 2000).

As summarized by Levin (2015: 1641), referring to Rappaport Hovav and Levin (1998)), the distinct behavior of result and manner verbs may be attributed to distinctions in their event structures: “manner verbs are basically associated with simple event structures as in (25), while result verbs are basically associated with maximally complex, causative event structures as in (26):

(25) [x ACT<MANNER> (y)]

(26) [[x ACT<MANNER> (y)] CAUSE [BECOME [z <STATE>]]].” (Levin (2015: 1641, example numbers retained).

In the analytical part of this dissertation, such notational representations will be of marginal importance. That is, as the analysis of the Tima verb lexicon undertaken here represents an initial and rather coarse classification of verbs, it does not generally appeal to such finer-grained semantic decompositions for analytical purposes. Still, it is important to emphasize the role of different levels of analysis (depending on the stage of the investigation as well as familiarity with the language under investigation) of lexical semantics that may be relevant for making robust grammatical generalizations.

To repeat, the analysis of English verbs (Levin 1993) exemplifies a language-particular linguistic investigation. The results of such detailed classifications at the level of individual languages are important for formulating and testing theoretical questions and, furthermore, may serve as an evidential basis for cross-linguistic comparisons and the establishment of linguistic universals.

Such a crosslinguistic perspective is taken by the Leipzig Valency Classes Project. Indeed, as mentioned by Malchukov (2015: 73), “[t]he Leipzig Valency Classes Project follows up on some in-depth studies of European languages such as Levin (1993) on English and an earlier study by Apresjan (1969) on Russian.” The project has investigated the valency patterns and morphosyntactic behavior of 70 core verb meanings in 30 languages in terms of alternations (Comrie et al. 2015: 4). The goal of this typological investigation is to discern crosslinguistic regularities (and variation) with regard to alternations shown by verbs with similar meanings. That is, the starting point is the lexical properties of verbs, which is the only reasonable approach with a typologically oriented study, given the mostly incommensurable inventories of coding mechanisms across (unrelated) languages.

One of the crucial motivating factors for choosing valency alternations associated with particular lexical semantics of the verbs is that “valency alternations generally do not affect all verbs equally and thus subclassify the verbal lexicon in a language.” (Haspelmath and Hartmann 2015: 65). In other words, the underlying hypothesis is that alternations in argument structure are sensitive to the meaning denoted by the verb, which potentially makes them (the alternations in argument realization) suitable instruments for investigating the semantic properties of verbs participating in the alternations. Likewise, Dixon and Aikhenvald (2000: 20) note: “[t]he meaning of a subclass of verbs will often incline it towards occurring with a certain kind of valency-changing derivation. For instance, if there is a class of verbs which typically have a human O argument (such as annoy, tire and please in English) these will typically occur in a passive construction, placing the underlying O in derived S function.”

Based on the data resulting from the individual studies arising from the Leipzig Valency Classes Project, Tsunoda (2015: 1603), for example, proposes a hierarchy of verb meanings that is meant to make predictions about argument realization frames of two-place predicates, depending on the verb's meaning:

Figure 2. Tsunoda's (2015) transitivity hierarchy

Effective action >> Perception >> Pursuit >> Knowledge >> Feeling >> Relation

According to the proposed hierarchy, verbs expressing a direct effect on an event participant resulting from the action, i.e. the leftmost meanings, will be coded as canonical transitive clauses (for each particular language), and, consequently, the corresponding intransitive predicate is expected to be a marked (i.e. derived) member of the transitive/intransitive alternation. The rightmost meanings, i.e. verbs expressing relational properties, e.g. possession, on the contrary, are predicted to receive argument coding deviating from the canonical transitive schema.

Wichmann (2015), based on the linguistic evidence from individual languages, proposes implicational hierarchies of verb meanings that predict their participation in various kinds of alternations, such as, e.g., passive, anticausative, antipassive, reflexive, reciprocal, and causative. Consider, as an illustration, the hierarchy of meanings for reflexive alternations (Wichmann 2015: 169):

Figure 3. Hierarchy of reflexive meanings (Wichmann 2015)

WASH, COVER, SHAVE, SHOW, CUT, SEE, HIDE, DRESS, GIVE, TOUCH > LOOK AT, HEAR, PUT, BEAT, HUG, SMELL, TIE, THROW, HIT, KILL, LIKE, FEAR, WIPE > KNOW, PUSH, ASK FOR, TEAR, NAME, HELP > SEARCH FOR, THINK, TEACH, TAKE, SAY, CARRY, TELL, BREAK, SEND > FRIGHTEN, TALK, LOAD > BUILD, STEAL > BRING, PEEL, COOK, FOLLOW, EAT > FILL, MEET, GRIND, SING, BURN, DIG, BE SAD, POUR, ROLL > SHOUT AT, BE DRY, SCREAM, LAUGH, RUN, PLAY, FEEL PAIN, LEAVE, GO > JUMP, SIT, BLINK, BOIL, BE A HUNTER > LIVE, RAIN, SINK, BE HUNGRY, DIE, FEEL COLD, CLIMB > SIT DOWN > COUGH.

The hierarchy is meant as an implicational scale: the verbs at the top of the scale are most likely to occur in a reflexive alternation, while the verbs at the bottom are very unlikely to undergo reflexivization.

The two approaches to exploring the verbal semantics, language-particular and crosslinguistic, briefly introduced above are necessarily mutually beneficial and feed into each other: the data obtained from individual languages provide an evidential basis on which generalizations can be

made when data from many languages are available, and the typological universals supply researchers working on individual languages with testable hypotheses that might be confirmed or found needing to be altered.

For the classification of verbs in Tima, likewise, the participation in valency alternations is taken as a testing ground for investigating the commonalities in the meanings of verbs in each alternation group. That is, the approach pursued here relates to the two approaches mentioned above in that, on the one hand, it relies on the hypothesis that verbs that behave in the same way have common meaning components; and, on the other hand, valency alternations are taken as a behavioral pattern that allows the grouping of verbs into coherent classes.

The following sections are devoted to the concepts and theoretical assumptions concerning valency, valency alternations, and related terms and concepts.

1.2.2 Major terms and concepts pertaining to verbal behavior

1.2.2.1 General remarks

As introduced already, the study of the verbal semantics in Tima as pursued here relies on the hypothesis that verbs with common patterns of behavior also share certain facets of meaning. For Tima, the participation of verbs in valency alternations has been taken as such a pattern of morphosyntactic behavior. This objective inevitably requires the study of verb valency, grammatical relations, and thematic roles, since the valency alternations represent a close interplay between these categories and must be studied in their relationships. For the analysis of the interrelationships among the named categories, the linguistic theory offers levels of analysis of different depths and different degrees of granularity. For the purposes of the present analysis, of principal relevance is the correlation between the level of syntactic arguments (i.e., the level of grammatical relations) and the level of the thematic roles of the participants of the denoted events (since valency alternations involve altering the mapping of the thematic roles onto the syntactic arguments). In the following, the general ideas concerning valency, transitivity, and syntactic arguments (grammatical relations) will be discussed. Some more detailed accounts of particular phenomena are given in the analytical sections in Chapters 2 and 3 dealing with specific linguistic facts in Tima.

1.2.2.2 Valency and transitivity

“The valency of a lexical item is its inherent relationality that allows it to govern a particular number of arguments (or actants, Tesnière 1959) of a particular type” (Haspelmath and Bardey 2004: 1130). Here, we will be concerned only with the valency of verbs.

A rather general definition encountered in the literature, such as the one given above, states that the valency of a verb tells us how many obligatory (i.e. non-omissible) arguments are implied by a given verb. According to this view, then, verbs fall into the following types: monovalent (implying one argument, e.g. *sleep*), bivalent (two arguments, e.g. *like*), and trivalent (implying three arguments, e.g. *give*).⁵ Haspelmath (to appear) also includes in the definition of valency the associated coding properties of the implied arguments: “The valency of a verb is the set of argument positions that the verb takes together with their grammatical properties” (Haspelmath, to appear: §2). What is emphasized by this extended definition is that, depending on the kinds of arguments a particular verb takes, the coding mechanisms can differ. Such an integrated definition is also referred to as a valency frame of verbs (Haspelmath, to appear: §2) or a valency pattern (Faulhaber 2011). For example, both *see* and *look* are bivalent verbs, yet *see* encodes its second argument as a direct object, i.e. as a core argument (*I see it*), while *look* requires the second participant to be encoded obliquely through a prepositional phrase (*I look at it*). Thus, the definition given by Haspelmath (to appear: §2) integrates the number of the arguments (i.e. valency in its basic conception) and the corresponding coding frame (i.e. language-particular mechanisms of coding pertaining to the notion of transitivity). The two example propositions adduced above, although both bivalent, differ in terms of their transitivity according to the grammatical structure of English: *I see it* is a transitive clause and *I look at it* represents an (extended) intransitive clause (see below for the clause types in terms of transitivity). It is thus important to keep in mind the areas of application of the terms ‘valency’ and ‘transitivity’: whereas we can effectively compare valency patterns across languages (allowing such projects as Leipzig Valency Classes, for example), coding properties (i.e. transitivity patterns) are too language-specific, to such a degree indeed that comparisons between languages can hardly deliver any important generalizations. As Kulikov, Malchukov, and de Swart (2006: vii) note, the relationship between valency and transitivity is such that

⁵ Furthermore, the so-called a-valent (or zero-argument) verbs can be found in some languages. Most commonly, these are verbs referring to meteorological events and they are relatively rare.

transitivity is a means to express a specific valency pattern relying on the available coding mechanisms of a certain language. Valency is generally regarded as a lexical property (e.g., Faulhaber 2011: 3-4); that is, in discussing the valency of (groups of) verbs, we are concerned with the semantic properties of verbs. Transitivity patterns, on the contrary, refer to particular morphosyntactic tools, chosen from the available inventory of a given language, that serve as a means of linguistic expression.

Anticipating the discussion of transitivity below, we can name another crucial distinction between valency and transitivity: valency can be characterized only in discrete terms (a verb can have either one, two, or three arguments, but not one and a half, for example), whereas transitivity, as it is now generally understood, is a scalar notion allowing different degrees of transitivity. The discreteness of verbal valency logically follows from the level of its operating. That is, the valency of a verb describes not only the number but also the kinds of arguments that in turn refer to participants of the event denoted by the verb. Participants of events are discrete entities picked out by the speaker for the purpose of communicating a particular idea; the kinds of participants in events can be described in terms of their roles. So, for example, Comrie (1989: 57) says: “Another way of describing the valency of the verb *give* would be to say that it takes an agent (the giver), a patient (the gift), and a recipient,” where agent, patient, and recipient are the thematic roles of the participants (the giver, the gift) of the event denoted by the verb *give*. (See section 1.2.2.3 below for a discussion of thematic roles as generalizations across participant roles). Some authors use the term ‘semantic argument’ to refer to the participants of events denoted by verbs to explicitly differentiate them from syntactic constituents such as subject, direct object, etc. (see e.g. Kulikov 2011: 369).

Often, the term ‘valency’ (of a verb) is used interchangeably with the term ‘argument structure’ (e.g. Haspelmath and Bardey 2004), although, as Haspelmath (to appear: § 5) remarks, the term ‘argument structure’ is used by some authors in reference to the labels of thematic roles of arguments implied by the verbs “as in ‘put <V, agent, theme, location>’” (e.g. Marantz 1984: 15; Bresnan 1994: 73, 80). The focus seems to vary between distinct aspects of apparently one and the same phenomenon: the valency of a verb, as described above, discloses the number and kind of arguments (or participants) associated with it; while the argument structure describes how these constituents are organized, i.e. structured in relation to each other within the predication. In the analytical part of this dissertation, the term ‘argument structure’ will be used in this sense, i.e. as referring to the valency of the verb, including the specification of the participant roles and their relationships to each other and to the predicate. So, in cases when

valency-changing operations are described, i.e. operations altering the basic valency (or argument structure) of a verb, the formulation will be, for example, “adding a new argument into the argument structure”, rather than adding a new argument into the basic valency (see section 1.2.2.4 below for explications of the typology of valency-changing operations).

In contrast to the valency of a verb, which depends on the lexical properties of the verb, transitivity, as is now widely accepted in the literature, is a property of a clause and represents a complex and gradable phenomenon resulting from the adding up of properties of individual parameters (see below). That is, whether the prototypical (for each particular language) transitive marking is employed depends on a combination of properties holding at the level of the whole clause, not just on the meaning of the verb. The earlier literature on transitivity focused on the number of core arguments and a particular encoding scheme as decisive factors, which basically represent only formal criteria (which indeed may be easily confused with valency, as defined above). On this view, the typology of clauses includes such clause types as intransitive (with one core syntactic argument), transitive (with two core syntactic arguments), and ditransitive (with three core syntactic arguments). Current understanding, in general, adopts a definition of transitivity that relies on multiple parameters. Hopper and Thompson (1980) famously identify ten such parameters which may affect the degree of transitivity of a clause; that is, a clause can be highly transitive or less so depending on the specific combination of the parameter values. The parameters are chosen so that the aspects pertaining to the properties of participants of the event (their number, agency, affectedness, volitionality), as well as the nature of the event itself (kinesis, aspect, punctuality, affirmation, mode) are equally considered as contributing factors to the ultimate coding of the clause (see Hopper and Thompson 1980: 252).⁶ The interaction of these elements produces a continuum, rather than a pure dichotomy, with intermediate positions possible for different construction types. The scalar model of transitivity based on the combinations of the ten parameter values is based on the conception of a prototypical transitive event as “a matter of carrying-over or transferring an action from one participant to another.” (Hopper and Thompson 1980: 253). Thus, the transfer is seen as more effective (more transitive) when the second participant of a two-participant event is highly individuated and definite, so that the effect of the action on this participant can be clearly

⁶ Notably, the number of participants as a defining feature of verbal valency is just one of ten parameters of transitivity. That is, depending on the constellation of the contributing factors, a two-participant predicate (i.e. based on a bivalent verb) may be coded as highly transitive or less transitive, according to the available morphosyntactic means in any particular language.

identified, than when this participant is non-individuated (plural, mass noun, non-referential), rendering the effect less salient. Likewise, when the event described is non-punctual, the transfer of the action has not been realized in its entirety, consequently making the action less effective, and hence less transitive.

An important corollary of the scalar definition of transitivity is that, across languages, clauses deviating from clearly transitive or clearly intransitive in terms of the parameter values may receive morphosyntactic coding distinct from the transitive/intransitive marking that is prototypical (for each language; see, e.g., Kittilä (2002: 15-16), who describes morphological transitivity as the linguistic reflection of semantic transitivity). Most probably, depending on the linguistic features of individual languages, different parameters will have more weight in determining the encoding pattern. For example, in Russian, negation has more weight in the coding differentiation of two-participant events than other transitivity parameters listed by Hopper and Thompson (1980). Consider the following contrasting sentences:

(1) *voditel' uvidel dorozhn-ij znak-Ø*
driver.NOM see.PST traffic.ADJ-ACC sign-ACC
'The driver saw the traffic sign.' (own example)

(2) *voditel' ne uvidel dorozhn-ogo znak-a*
driver.NOM NEG see.PST traffic.ADJ-GEN sign-GEN
'The driver didn't see the traffic sign.' (own example)

The affirmative two-participant clause in (1) receives the prototypical (for Russian) transitive coding whereby the agentive participant is marked with the nominative case and the patientive argument with the accusative. In the corresponding negated predicate in (2), a distinct marking is used: the patientive argument is marked for the genitive case, which is a pattern deviating from the prototypical transitive in Russian and which makes the clause less transitive.

Aside from Hopper and Thompson's (1980) account, other researchers widely accept the gradable as opposed to the dichotomic nature of transitivity and develop explanatory frameworks that use other parameters associated with semantic, pragmatic (and discourse) layers of linguistic constructions as the contributing factors that may influence the linguistic coding. For example, cognitively oriented approaches – often appealed to in the analytical section – relate the coding properties of clauses (i.e. as more or less transitive) to the cognitive conceptualization of events by the speakers. Givón (1989), for example, suggests that

alternative morphosyntactic codings of events are to be traced back to the way the speaker views and conceptualizes an extra-linguistic event. Thus, when, from the speaker's perspective, the agent of an action is irrelevant for the current communicative purposes, it may be backgrounded in order, for example, to foreground some effect on the patient. Such a conceptualization results in a detransitivized construction with fewer participants than the basic transitive schema, as, for example, in the case of passive(-like) constructions.

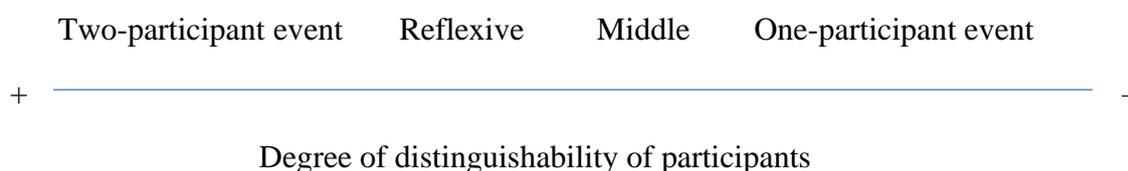
Speaking very broadly, the cognitive approaches to transitivity phenomena implicitly or explicitly apply the general model of human cognition in terms of cause and effect. The linguistic encoding, according to this view, depends on whether the whole causal chain (to use the terminology of Croft (1990)), or just one particular segment (such as cause, change, state), or their specific combination gets expression by the speaker (see DeLancey 1987: 60; Lakoff and Johnson 1980). That is, when the event is conceptualized as including its causal (or initiating) element, as well as the effect of the event registered on a distinct entity (the receiving endpoint), thus corresponding to the archetypal transitive situation, it is expected to be linguistically encoded as a prototypical transitive clause. Departure from the prototype, for example, when "CAUSE and EFFECT are not perceptually distinct" or, otherwise, when "either the CAUSE or the EFFECT event is not fully accessible to an observer" (DeLancey 1987:61), is likely to be reflected linguistically in the form of detransitivized constructions (or at least constructions deviating from the transitive prototype).

Kemmer (1993), in her account of middle constructions across languages, pursues a similar cognitive-semantic approach. The author appeals to the notion of the distinguishability of participants as a factor that determines how the corresponding event will be linguistically encoded by the speaker: as a prototypical two-participant (transitive) or one-participant (intransitive) predicate. The distinguishability of participants is characterized by Kemmer in terms of their saliency with respect to the general background and the maximal distinctness of participants from each other, both physically and conceptually (correlating with the individuation parameter of Hopper and Thompson (1980)). Participants in an event are referred to as the initiator of the action and the endpoint of the same action. In a prototypical two-participant event, the two participants, the initiator and the endpoint, refer to physically distinct entities and they are highly distinct conceptually as well. The relationship between them is asymmetrical: the initiator carries out an action and the endpoint accumulates the effect of this action. An event thus conceptualized is expected to receive the transitive coding that is prototypical (for any given language). Deviations from this prototypical model, for example,

when the initiator and the endpoint refer to one and the same physical entity, result in such detransitivized constructions as, for instance, reflexive and middle (details on the differentiation between the middle and reflexive constructions as accounted for by Kemmer (1993) are given in the analytical section on these phenomena in *Tima*; see section 2.1 in Chapter 2).

Based on the parameter of the distinguishability of participants, Kemmer (1993: 73) offers the following scale of types of events, ranging from prototypical two-participant to prototypical one-participant events. Reflexive and middle constructions occupy an intermediate space between the canonical two-participant (i.e. transitive) and one-participant (i.e. intransitive) event types:

Figure 4. Types of events based on the Distinguishability of Participants (reproduced from Kemmer 1993: 73)



In general terms, the scale predicts that event types with a low degree of distinguishability of participants are more like prototypical one-participant events and, consequently, “the linguistic expression for such types will resemble that for one-participant events” (Kemmer 1993: 214). And conversely, events with a high(er) degree of differentiation between the participants are expected to be encoded as canonical transitive clauses (according to the typological features of the language in question and its morphosyntactic mechanisms). The intermediate positions, i.e. reflexive and middle event types, may then exhibit patterns of markedness in terms of morphosyntax due to their deviation from the most prototypical construal of events.

Næss (2007) is another notable account of transitivity; the author assumes a gradable character of transitivity and attributes deviations from (high) transitive morphosyntax to the decrease in transitive features for pragmatic, semantic, and/or discourse purposes. She acknowledges the existence of language-specific coding schemes but emphasizes that, crosslinguistically, the corresponding semantic aspects critically coincide, as can be distilled from many accounts on transitivity (see e.g., Givón 1985; Kittilä 2002; Lazard 2003). These semantic properties include such components as a volitionally acting “agent” participant performing a concrete, dynamic action, which has a perceptible and lasting effect on a specific “patient”; the prototypical transitive event is cast in realis mood, perfective aspect, etc. (see Næss 2007: 14). Overall, these

are components which are very reminiscent of the parameters suggested by Hopper and Thompson (1980). Taking into consideration these previous findings, Næss (2007) refines the theory of transitivity, suggesting a new layer of analysis formulated as the Maximally Distinguished Arguments Hypothesis:

The Maximally Distinguished Arguments Hypothesis

A prototypical transitive clause is one where the two participants are maximally semantically distinct in terms of their roles in the event described by the clause. (Næss 2007: 30)

The Hypothesis is based on an idea similar to that of Kemmer (1993) regarding the distinctness of participants as a criterion for the coding properties of clauses. In order to measure the conceptual distinction between the participants, Næss (2007) offers a feature-based definition of the standard transitive participants, i.e. agent and patient. According to this definition, in a highly transitive predicate, the two participants are maximally differentiated in terms of such semantic components as [\pm Volitional], [\pm Instigating], [\pm Affected] (henceforth the abbreviations VOL, INST, and AFF will be used respectively). A prototypical transitive agent is characterized as [+VOL, +INST, -AFF], i.e. it is a participant that volitionally instigates (i.e. causes) an action by which (s)he her/himself is not affected. The patient participant, in contrast, is defined by the feature specification with opposite values, i.e. [-VOL, -INST, +AFF]. Thus, the prototypical patientive participant is a participant who is not volitionally (i.e. intentionally) involved in the action but who accrues the effect from the action instigated by the agent. Importantly, in a transitive prototype, the affectedness of the patient directly results from the volitional instigation of the agent. The Maximally Distinguished Arguments Hypothesis predicts that clauses with participants corresponding to the prototypical agent, i.e. [+VOL, +INST, -AFF] and patient, i.e. [-VOL, -INST, +AFF] will receive the canonical transitive morphosyntactic encoding (depending on the language). Or, as Næss (2007: 17) puts it, “the prototype model predicts that all clauses which fulfill the semantic criteria for transitivity should be formally transitive – or, to be exact, all semantically transitive constructions should behave in a similar way formally.” Furthermore, the Maximally Distinguished Arguments Hypothesis says that the presence of the defining features of the contrasting category (e.g. [+AFF] or [-VOL] – the defining properties of a patient argument – with the agentive participant) may result in constructions deviating from the transitive prototype due to the reduction of the distinction between the participants. The reduced semantic transitivity reflected in deviating morphosyntactic expressions may be illustrated with the following German sentences:

(3) *Ich zerbrach das Glas*
 PRON1SG.NOM break.PST DEF.N.ACC glass
 ‘I broke the glass.’ (own example)

(4) *Mir ist das Glas zerbrochen*
 PRON1SG.DAT AUX DEF.N.NOM glass break.PERF
 ‘I (accidentally) broke the glass.’ (own example)

In (3), the proposition is coded as a transitive clause that is prototypical for German, with the agentive argument bearing nominative case, and the patientive argument accusative case. In (4), in contrast, the agentive argument is cast in the dative case; the resulting construction thus deviates from the transitive prototype. The contrast in the marking of the agentive participants in (3) and (4) can be explained in terms of the feature specification values as defined by the Maximally Distinguished Arguments Hypothesis: the construal in (4) explicitly expresses a lack of intentionality, i.e. it specifies the feature value [-VOL] for the agent argument (as made clear by the English translation. Note also that while (3) may still describe a situation of an accidental breaking of the glass depending on the context, the sentence in (4) can only be interpreted as an unintentional action). Thus, the conceptual distinction between the argument types is reduced in that the agentive participant exhibits the defining property of the contrastive patientive participant – both participants in the clause are characterized as [-VOL]. The Maximal Argument Distinction Hypothesis accounts for the marking contrast between (3) and (4) in terms of this partial semantic assimilation between the two participants.

Conversely, another implication of the Hypothesis is that clauses not corresponding formally to the transitive pattern in a given language are highly likely to deviate semantically from a prototypical transitive event type (see Lazard (2003: 155) for a similar observation).

Crucially, the feature-based approach to the transitivity constructions advocated by Næss (2007) provides an analytical tool that explains similar (or identical) formal treatments of seemingly distinct semantic types of events in terms of verb-argument relations. I will return to this question in the next section, which discusses thematic roles.

To conclude this section, I would like to reiterate the main distinction between the notions of valency and transitivity. (Basic) valency is a lexical property of verbs that informs us about the number of inherent arguments of a given verb. Thus, verbal valency enables us to investigate verbal behavior in terms of valency-changing operations that alter the number of arguments and

generalize over the correlations between verbal meaning and morphosyntactic behaviors (see section 1.2.2.4 below on the typology of valency-changing operations). Transitivity, by contrast, is a complex phenomenon operating on the clausal level with two main aspects to it: semantic transitivity and the corresponding morphosyntactic coding. Depending on a specific combination of factors contributing to the construal of an event as more or less transitive (in terms of the effect of transfer of the action from one participant toward the other), languages may employ distinct coding schemes to reflect the degree of semantic transitivity. Consequently, one and the same bivalent verb, for example, can be part of a predicate that is construed as highly transitive or as less transitive (e.g. by changing the mood from affirmative to negative). In the analytical part of the dissertation, the term ‘transitive/intransitive clause’ will be used in the sense of morphosyntactic coding specific to Tima (see section 1.3.4.3.1 for the mechanisms of transitivity marking in Tima).

1.2.2.3 Thematic roles⁷

The present section gives a general overview of the theoretical concept of thematic roles and explains the usage of specific labels in the linguistic analysis of Tima. The topic of thematic roles is extremely complex and remains an unsettled theoretical problem with different authors suggesting distinct criteria for establishing the ideal set of individual roles. The overview presented here is not meant to be comprehensive and does not consider all theories of thematic roles; it also does not concern itself with the historical development of these theories (see e.g. Dowty 1991 and Butt 2005 for good synopses of the history).

The need to postulate thematic roles resides in the desire to make possible generalizations concerning the semantic/syntax interface with respect, in the first place, to argument realization patterns. Thematic roles, thus, refer to generalizations across argument types that are intended to capture regularities between the semantic structure and the syntactic expression of the

⁷ In many sources, the term thematic role is used interchangeably with the term semantic role (or the term semantic role is used in the sense of thematic role without any specification of the difference between the two terms). I use the term thematic roles following Van Valin and LaPolla (1997), who distinguish between thematic roles and semantic roles. The authors define semantic roles as verb-specific participant roles, e.g. the verb *break* has, as the specific semantic roles of the participants of the breaking event, a ‘breaker’ and a ‘broken (thing)’. Thematic roles, on the contrary, are abstracted generalizations (agent, patient, instrument, experiencer, etc.).

predicate. The theory of thematic roles ideally determines the optimal number of types that are grammatically relevant and allows predictions to be made concerning argument realization properties in particular constructions. However, the precise number and types of roles, as well as the degree of granularity necessary to resolve the issues of the syntax-semantic interface in the most optimal way possible, remains a matter for debate. This indeterminacy seems to point to the fact that, depending on specific linguistic phenomena under investigation, different approaches to thematic roles are more or less applicable, so it may make sense to establish which grammatical processes need what level of generalization in terms of thematic roles.

Speaking in very general terms, approaches to thematic roles may be distinguished based on their distinct levels of generality. Apart from verb-specific participant roles (e.g. runner, buyer, killer, etc.), the following levels of generality can be identified: i) discrete thematic roles, such as agent, patient, theme, etc. (see below for typical kinds of discrete thematic roles); ii) ‘macro roles’ such as Actor and Undergoer (Van Valin and LaPolla 1997), or Proto-Roles – Proto-Agent and Proto-Patient (Dowty 1991) that are generalizations across the discrete roles; iii) feature-based role specification, such as, for example, the combination of values of three basic features [\pm Volitional], [\pm Instigating], [\pm Affected] (Næss 2007, introduced above in 1.2.2.2). For the linguistic analysis of Tima verbs, all three levels have their relevance and will be referred to in the analytical part of the dissertation. For this reason, some explanatory remarks pertaining to each level of generality of thematic roles are given below (this is not intended to be a comprehensive description of each approach; only relevant aspects will be presented in a detailed way).

Concerning the level of discrete thematic roles, in the present dissertation, the following roles, suggested by VanValin and LaPolla (1997: 85-86),⁸ will be referred to in describing particular

⁸ The labels given by Van Valin and LaPolla (1997: 85-86) describe participant roles in states of affairs. As defined by the authors, a specific participant role that an argument bears in any given predicate is dependent on the type of event (or state of affairs) expressed by the whole predicate. Consequently, the assignment of the thematic role to an argument is always a matter of the interpretation of a concrete predicate. As Van Valin and LaPolla (1997: 86) put it, “it is possible to derive participant roles by analyzing states of affairs, but the converse is not possible, since participant roles cannot be defined without reference to states of affairs.” Importantly, the properties of the arguments of the predicate likewise contribute to the interpretation of their thematic relationship with the predicate. So, in the proposition *Alexander opened the door*, the argument in the subject position is an agent since it is a controlling (and by extension human) willful participant. Yet, in *The key opened the door*, the subject argument is an Instrument. The labels for thematic roles (or thematic relations) in Van Valin and LaPolla’s (1997) theory are the same as those used with the corresponding participant roles (Van Valin and LaPolla 1997: 113).

linguistic phenomena. The authors define thematic relations as “semantic relations between a predicate and its arguments which express the participant roles in the state of affairs denoted by the verb” (Van Valin and LaPolla 1997: 113). Table 1 shows the kinds of thematic roles and the associated semantic content relevant to the linguistic analysis of Tima verbal behavior.

Table 1. The list of thematic roles used in the linguistic analysis of Tima

Label	Semantic content (from VanValin and LaPolla (1997: 85-86))
<i>agent</i>	a willful, purposeful instigator of an action or event
<i>experiencer</i>	sentient beings that experience internal states, such as perceivers, cognizers and emoters
<i>instrument</i>	normally inanimate entities manipulated by an agent in the carrying out of an action
<i>patient</i>	things that are in a state or condition, or undergo a change of state or condition
<i>theme</i>	things which are located or are undergoing a change of location
<i>benefactive</i>	the participant for whose benefit some action is performed
<i>recipient</i>	someone who gets something
<i>goal</i>	destination, which is similar to recipient, except that it is often inanimate
<i>source</i>	the point of origin of a state of affairs
<i>location</i>	place or a spatial locus of a state of affairs

Some thematic roles relevant to the discussion in the analytical part are not among those listed by Van Valin and LaPolla (1997).⁹ Two further roles will be used in the analysis below: Stimulus – the role that might be described as reciprocal to the Experiencer role in that it refers to the content of some type that triggers a sensual perception or a particular mental state; and – though less relevant – Ground, the role proposed by Talmy (1985) to describe the relational opposition Figure-Ground, as, for example, in *The cup is on the table*, where *cup* is the Figure and *table* is the Ground. To refer to the thematic roles of participants in events in the analysis of Tima, I will use capitalized labels, e.g. Experiencer.

The postulation of generalized thematic roles has been triggered by the insight that a substantial number of morphosyntactic processes can be linked to just two fundamental types of arguments,

⁹ Van Valin and LaPolla (1997: 86) explicitly note that the list is not meant to be exhaustive but rather shows the types of roles most relevant to the theoretical discussion in the approach pursued by the authors.

the standard arguments of a (prototypical) transitive predicate: an agentive argument, on the one hand, and the patientive argument, on the other. The generalized roles represent clusters of semantic features rather than discrete and clearly demarcated categories. Their postulation is motivated precisely by the difficulty of drawing the lines between the discrete thematic roles in terms of criteria relevant to grammatical processes. In general terms, the agentive participant (Actor, or Proto-Agent) is a participant responsible for the actualization of the event denoted by the predicate, while the patientive participant (Undergoer, or Proto-Patient) is a participant that is affected by the event. It is presupposed that the generalized thematic roles subsume the more specific discrete thematic roles, so that, for example, Experiencer is a kind of a more general overarching category – Proto-Agent in the terminology of Dowty (1991) or Actor in the terminology of Van Valin and LaPolla (1997). According to the RRG (Role and Reference Grammar) approach to thematic roles (Van Valin and LaPolla 1997), the Actor macro-role subsumes such minor thematic roles as Agent, Effector, Experiencer, Instrument, and some others, while the category of Undergoer includes Patient, Theme, Recipient, Goal, etc. Dowty (1991) defines the proto-roles in terms of the sets of verbal entailments responsible for argument selection:

Table 2. Properties of Proto-Agent and Proto-Patient (Dowty 1991: 572)

Contributing properties for the Agent Proto-Role	Contributing properties for the Patient Proto-Role:
a. volitional involvement in the event or state	a. undergoes change of state
b. sentience (and/or perception)	b. incremental theme ¹⁰

¹⁰ The category of Incremental Theme introduced by Dowty (1991), elaborating on Dowty (1987), refers to telic predicates (accomplishments and achievements) and ascribes the crucial role of the overall aspectual value of the clause to the (properties of the) patientive argument NP. Dowty's (1991: 568) examples of the incremental theme include such predicates as 'build a house', 'write a letter', 'eat a sandwich', etc., where 'house', 'letter', and 'sandwich' represent incremental theme arguments. Such arguments serve as a kind of measuring unit: "The meaning of a telic predicate is a homomorphism from its (structured) theme argument denotations into a (structured) domain of event" (Dowty 1991: 567). Put very simply, the event of building a house, for example, is completed (i.e. telic) when the whole house is built, not just parts of it. Consequently, the predication *John has built a house* receives a telic interpretation, whereas *John is building a house* is an atelic predicate since the event of building a house is not yet completed. Obviously, depending on the grammatical distinctions made by individual languages, different aspects of the measuring arguments, i.e. incremental themes, will have an impact on the aspectual value of the entire clause, e.g. number (singular vs. plural), countability (countable vs. mass nouns), definiteness of NPs, etc., or, as is the case in English, the temporal properties of verbs. Building on Dowty's notion of incremental theme, Tenny (1992: 2) has developed the "Aspectual Interface Hypothesis", formulated as follows:

c. causing an event or change of state in another participant	c. causally affected by another participant
d. movement (relative to the position of another participant)	d. stationary relative to movement of another participant
(e. exists independently of the event named by the verb)	(e. does not exist independently of the event, or not at all)

The argument selection principle based on the entailments of the properties of proto-roles (Dowty 1991) predicts that in a basic (i.e. non-derived) two-participant clause, an argument possessing more properties associated with the Proto-Agent will be encoded as a syntactic subject, and the argument with more Proto-Patient properties as the syntactic direct object (see Dowty 1991: 576). The entailments can likewise be applied to the derived predicates resulting from valency-changing operations. For example, in object-promoting operations, such as anticausative, the argument with more Proto-Patient entailments occupies the syntactic subject position.

One implication of the category of generalized roles is that the minor categories subsumed within it share significant portions of grammatically relevant semantic properties. This semantic affinity should allow the prediction that the predicates involving the arguments that bear a role subsumed in either major group will exhibit similar clausal level behavior without any need to specify discrete thematic roles.

As an example of the sufficiency of the level of generalized thematic roles for analytical purposes, Van Valin (1999) mentions Reflexive constructions: “Reflexive binding is another phenomenon which has been analyzed in terms of GSRs [Generalized Semantic Roles; NV], e.g. Van Valin and LaPolla (1997). Universally, actors bind undergoers in the prototypical case (reformulating the finding of Faltz 1985 in terms of GSRs)” (Van Valin 1999: 7). Likewise, with passive or analogical object-promoting operations (such as the resultative or anticausative in Tima; see 3.3.3 and 3.3.4, respectively), it is sufficient and thus quite convenient to make

“The mapping between thematic structure and syntactic argument structure is governed by aspectual properties. A universal aspectual structure associated with internal (direct), external and oblique arguments in syntactic structure constrains the kinds of event participants that can occupy these positions. Only the aspectual part of thematic structure is visible to the syntax.”

simple generalizations in terms of generalized roles, e.g. that in the active voice the subject is an actor (or agent), while in the derived passive the subject is an undergoer (or patient).

The two major approaches to the generalized thematic roles, the Macro-Role approach offered by RRG (Van Valin and LaPolla 1997) and the Proto-Role approach of Dowty (1991), are embedded in different argumentation frameworks but largely arrive at a similar conclusion, namely that in order to describe grammatical processes related to the realization of arguments in clauses, it is sufficient to operate with the dichotomic distinction between two semantic categories. In the analytical part of the dissertation, the formulation ‘agent(-like)’ or ‘agentive participant’ and ‘patient(-like)’ or ‘patientive participant’ will be used with reference to argument roles in the proto-role sense.

An alternative approach to the investigation of verb-argument relations is offered by Næss (2007), as mentioned already in 1.2.2.2. The author suggests that argument coding properties can be effectively analyzed and by extension predicted from the constellation of individual semantic features that define the argument types (see Næss 2007: 197). As was introduced in 1.2.2.2, the argument types can be described in terms of the values of such features as [\pm VOL, \pm INST, \pm AFF]. The assumption of the feature-based approach to argument realization properties introduced by Næss (2007) is, firstly, that depending on a particular combination of feature values, it should generally be possible, in a given language, to predict a type of clause including its coding patterns; and secondly, the types of arguments sharing semantic properties in terms of feature values are expected to show similar coding properties. With regard to the first assumption, we saw above in section 1.2.2.2 that a clause with two arguments, one of which is characterized as [+VOL, +INST, -AFF] and the other as [-VOL, -INST, +AFF], will be highly likely to be encoded as a prototypical transitive clause in a given language (according to the Maximally Distinguished Arguments Hypothesis). The second assumption allows us to explain the similar patterns of behavior of different argument types, such as Experiencer, Recipient, and Beneficiary, which in many languages receive an identical case marking – the dative. Næss (2007: Chapter 5) suggests that all three categories, i.e. Experiencer, Recipient, and Beneficiary, share the specification [+VOL, -INST, +AFF]. An Experiencer may thus be defined as a participant who is affected ([+AFF]) in terms of “experiencing a mental or physical state or a sensory impression” (Næss 2007: 90). The specification [+VOL] refers to the requirement of sentience, not necessarily a volitional engagement in the event, but the active cognitive capacity to experience a particular sensation. That is, only a sentient being can be meaningfully said to experience something.

The feature specification [\pm INST] (Instigation) is associated with causation, i.e. its positive value describes a participant that causes (or initiates) the event denoted by the verb (Næss 2007: 87). Thus, the Experiencer argument receives the feature value [-INST], since the causing element in Experiencer constructions is, as a rule, a distinct Stimulus. Similarly, Recipients and Beneficiaries can be analyzed in terms of feature values as [+VOL, -INST, +AFF]. That is, to come into possession of an entity (Recipient) or benefit from an event (Beneficiary) presupposes sentient awareness on the part of the corresponding argument, which is the implication of the positive value of the Volition component. The Recipient and Beneficiary are affected arguments since they undergo a change of state – from not having an object of some sort to having one (Recipient) – and a beneficial effect can likewise be presupposed on a Beneficiary. Again, as with the Experiencer, in basic constructions, the Recipient and Beneficiary are not usually instigating participants.

The combination of feature values typical for Experiencers, Recipients, and Beneficiaries, i.e. [+VOL, -INST, +AFF], is designated Volitional Undergoer (Næss 2007: §5.3.1). That is, Volitional Undergoer is an argument type whose affectedness by an external event is keyed to its being sentient. Due to the fact that a great number of languages across the world treat Experiencers, Recipients, and Beneficiaries similarly in terms of morphosyntactic coding, e.g. through dative flagging, the semantic category Volitional Undergoer can be considered a relevant linguistic category.

Other combinations of feature values yield other types of arguments; for example, [-VOL, +INST, - AFF] yields the argument type (natural) Force, i.e. non-sentient, causing, and not affected; [-VOL, +INST, +AFF] yields Instrument, also non-sentient and causing, but affected due to the fact that an instrument is usually manipulated; [+VOL, +INST, +AFF] yields Affected Agent (for other categories and explanations, see Næss (2007: Chapter 5)). Most relevant for the description of the verbal behavior in Tima is the category Affected Agent, an argument type that is characterized by positive values for all three semantic features: it is a participant that is volitional (i.e. sentient), instigating (i.e. causing the event), and, crucially, affected by the same event. I will return to this category in 2.2.2, where the relevant linguistic phenomena in Tima are analyzed. Suffice it to say here that Affected Agent represents an argument type that conflates the conventional agent and patient properties in that it refers to the participant that instigates (causes) the event and is simultaneously affected by this same event. In this regard, the concept of Affected Agent is similar to the notion of the conceptual status ‘affected entity’ (Klaiman 1988). “Affected entity status can accrue to arguments representing

various thematic relations, and in fact it can converge with either macrorole posited by Foley and Van Valin [(1984)], actor or undergoer, upon a single sentential argument” (Klaiman 1988: 28). From the perspective of the conceptual status of an argument as argued for by Klaiman (1988), the subject argument of the sentence *The dog sensed the earthquake* (Klaiman 1988: 27), for example, is an actor (or agent) and undergoer (or patient) simultaneously. Thus, contrary to the premise of the macro-role theory, which postulates a dichotomy between two argument types (an argument can be either an actor or an undergoer), Klaiman (1988) and Næss (2007) permit their merging, often reflected linguistically by means of specific constructions. Notably, the category Affected Agent has proved to provide an explanatory basis for the peculiar patterns of behavior of the so-called ingestive verbs under causativization (e.g. Saksena (1980, 1982) employs the Affected Agent category to explain the alternations in the coding of the Causee argument in Hindi; see 2.2.2.1 for the analysis of ingestive verbs in Tima). Furthermore, Haspelmath (1994) shows that a rather exceptional formation of active resultative participles with agentive verbs is possible when the agent is “saliently affected” and names such verbs as ‘eat’ and ‘drink’, ‘learn’, ‘see’, ‘put on’, and ‘wear’ (Haspelmath 1994: 161). Moreover, the Affected Agent category finds application in the analysis of object-deleting constructions across languages (for examples, see Næss 2007: §§4.3.1, 4.3.2). These named instances of how the category Affected Agent can be applied to explain behavioral patterns in various languages confirm the high relevance of a feature-based approach to argument types in particular linguistic domains (i.e. where the appeal to macro-roles or even discrete thematic roles proves insufficient).

The next section is devoted to the typology of valency-changing operations and explains the terminology used in the linguistic analysis of the Tima data.

1.2.2.4 The typology of valency-changing operations and related issues

As was explained at the beginning of this dissertation, the analysis of the verbal lexicon pursued here relies on shared patterns of morphosyntactic behavior such as the participation of specific groups of verbs in valency alternations. This section deals with the theoretical basis on which the discussion of valency-changing operations in individual languages can be built. The term ‘valency alternation’ is widely used in the typological literature (e.g. Butt and King 2006;

Malchukov 2015; Kageyama and Jacobsen 2016; Haspelmath, forthcoming) to describe processes that reduce or increase the basic valency of the verbs (some authors also include in this rubric argument rearrangement constructions, such as dative alternation, for instance, where the number of arguments remains unchanged). In some sources, the term ‘voice alternation’ is used in the same sense as valency alternation. Some authors explicitly stress that they use the term ‘voice alternation’ in the sense of a verb-encoded valency alternation (e.g. Malchukov 2015), without specifying, however, what specific types of alternations are included, for example, whether causative alternation is considered a voice alternation or not. That is, we can observe that the originally rather restricted usage of the term ‘voice’ as applied to inflectional categories in classical Indo-European languages (such as middle and passive voice where voice categories are expressed cumulatively with inflectional endings for person and number) nowadays finds broader application in the typological perspective and includes a wider range of phenomena involving valency-changing processes (Zúñiga and Kittilä 2019; see also Kulikov 2011: §3.2 for a discussion of the narrower and broader senses of voice; see Shibatani 2004: 1146, 1147 on a narrow definition of voice as an inflectional category).

Some authors demarcate the area of what constitutes a voice phenomenon depending on whether the process involved changes the semantic meaning of the derived predicate or not. Under this view, only those alternations that preserve the thematic roles count as voice phenomena. For example, Crystal (2003) does not consider causative a voice phenomenon due to the semantic inequality between the base and derived clauses, whereas Shibatani (2006) pleads for the inclusion of causative alternation in the category of voice alternation. Yet, as noted in Kulikov, Malchukov, and de Swart (2006:xv), due to the widespread polysemy of voice morphology (e.g. passive, which preserves roles, and causative, which adds a Causer role, are expressed by the same morpheme in many languages), it is not feasible to draw the line between valency-changing operations and standard voices, like passive and antipassive (see Shibatani 2004: 1145-6 on the problem of the multiplicity of functions borne by a single morpheme). The issue of the multifunctionality of morphemes involved in valency alternations is highly relevant in the verbal domain in Tima, as will be shown below in the linguistic analysis. For this reason, the more transparent and neutral term valency-changing alternations will be used to describe verbal behavior in Tima.

The typology of valency-changing (or argument-changing) processes is commonly represented in terms of valence increase (or adding of arguments) and valence (or argument) reduction. Languages employ varying sets of valency-changing mechanisms of both types. Depending on

the linguistic means available in a given language (and sometimes on the approach pursued by the researcher), different labels can be applied to phenomena that are similar from the typological perspective. For example, labels as diverse as stative, neuter, agentless passive, pseudo-passive are applied by different authors in reference to the functions of the pan-Bantu detransitivizing derivational suffix *-Ik* (see e.g. Mchombo1993; Dom et al. 2018; see Haspelmath 2010 for the discussion on the language-specific descriptive categories as opposed to comparative cross-linguistic concepts).

Valency-decreasing operations are further classified in terms of the role of the argument removed: agent-removing (or subject-removing) or patient-removing (object-removing). Sometimes the reverse terminology is used: agent-preserving vs. patient-preserving (see Haspelmath and Bardey (2004: §§2, 3) for an overview and examples of valency-changing processes from the typological perspective). Among the patient-removing (or agent-preserving) valency-decreasing processes, the most widespread are antipassive, reflexive, reciprocal, and middle. Agent-removing (or patient-preserving processes) are anticausative, passive, resultative, etc.

Valency-increasing operations subsume two major groups depending on whether a new agentive or patientive argument is introduced into the underlying argument structure. Adding a new agent is a function of causativization, while applicative formation adds a new patientive argument.

Both types of processes, i.e. valence increasing and valence reduction, can be described for individual languages, as well as crosslinguistically, in terms of morphosyntactic modifications. Conventionally, causativization, for example, is described as a process applied to a basic (underlying, unmarked) intransitive predicate; the causative derivation results in (i) the demotion of the initial subject into the direct object position, and ii) adding a new argument in the vacated subject position (the particular processes typical for Tima valency-changing operations will be described in the relevant subsections, so I will not discuss here each process in detail).

Across languages, changes in the basic valency of a verb are typically signaled by special morphemes (I leave aside here the labile unmarked patterns of valence change characteristic of English).¹¹ Haspelmath and Bardey (2004: 1139) observe that “[v]alency-changing categories

¹¹ Labile (or ambitransitive) verb forms refer to pairs of verbs with different valency patterns that do not vary in formal expression, i.e. one and the same verb form may be used in transitive and intransitive predicates. The verbs

generally have many of the properties that are considered as characteristic of derivation as opposed to inflection”; that is, the valency-changing elements are not obligatory, are prone to idiosyncratic peculiarities and lexicalizations, and exhibit varying degrees of productivity. The observed tendency of the valency-related verbal markers to be derivational rather than inflectional can be linked to their functional nature, namely their considerable semantic modification in terms of the configuration of thematic roles and/or their number. As Bybee (1985) argues, on the inflectional-derivational continuum, those elements that are closer to the derivational end exhibit a higher degree of relevance to the verb meaning. The relevance to the verbal meaning also means that the application of the valency-changing categories is sensitive to the lexical meaning of the verb. Accordingly, the studying of valency-changing processes provides a suitable basis for examining verbal semantics.

Valency alternations involving derivational morphemes are commonly presented as pairs of base/derived verb forms where the base form has no marking on the verb and the derived form has.¹² Shibatani (2016: 445) remarks in this regard, “[i]n derivational morphology a morphological marking is taken as a sign flagging the secondary, derived status of the marked form in question vis-à-vis the unmarked counterpart.” Aside from such asymmetrical pairs, some languages, including Tima, have what Foley (2008) calls symmetrical voice (i.e. valency) alternations, where both alternating verb forms receive morphological coding. The symmetrical alternation pairs are also called equipollent in the literature (e.g., Haspelmath 1993), or double derivation (Nichols et al. 2004). Since both the intransitive and transitive members are derived from the same verbal root, such cases are considered a subtype of non-directional derivation, meaning that both counterparts of the alternation have equal derivational status, neither of them being an unmarked and thus basic member.

And what can be considered a subtype of symmetrical marking is treated in the literature under the label of precatatorial verb roots (Shibatani 2016: 452-3, following Artawa 1994 in reference to some Indonesian languages). In contrast to verb roots that can be used in particular syntactic structures corresponding to their basic valency without any additional marking (representing

can be A(gent)-labile, whereby the intransitive counterpart has the agentive argument as its subject, e.g. *Maria ate an apple* vs. *Maria is eating*, or P(atient)-labile with the transitive patientive argument as the syntactic subject in the intransitive variant, e.g. *The boy broke the twig* vs. *The twig broke*. (see Dixon 1994).

¹² It should be noted that in some languages, valency alternations lack any morphological marking (as is the case in isolating languages) or are not always a reliable indication of the direction of the derivation (see Shibatani 2016 for a critical assessment of the role of morphology in valency alternations across languages).

the unmarked alternants in the asymmetric alternations), precategorial roots cannot enter a syntactic construction without a derivational marking. These roots are thus neutral with regard to their valency value (i.e. they do not have a basic valency) until derived by an appropriate affix. In Tima, some verbs can be characterized as precategorial roots, i.e. these roots cannot be used without derivational marking, as exemplified by the next example pair:

- | | | | |
|-----|------------------------------|-----|---|
| (5) | <i>àŋ-kálà-àk</i> | vs. | <i>àŋ-káli-ik</i> |
| | PERF3-eat-MID/REFL | | PERF3-eat-CAUS |
| | ‘(S)he/they has/have eaten.’ | | ‘(S)he/they _i has fed him/her/them _j .’ |
| | (12.04.09-08-06.wav) | | (06.04.09_07-21.wav) |

The opposition presented in (5) shows the intransitive-transitive alternation based on the verbal root *kálà* ‘eat’; both alternants are derived with suffixes: the detransitivizing *-àk* and the transitivizing *-ik*. The employment of the underived root in a syntactic construction is impossible. As concerns Tima, the number of precategorial verbal roots lacking basic valency is rather small. Still, the existence of such roots in languages (see e.g. Shibatani 2016 on Balinese and other Indonesian languages) challenges the universality of the valence-increasing/decreasing functions of derivational affixes since, with precategorial roots, there is no increase or decrease due to the lack of a basic valency pattern.

In order to describe valence-changing operations that modify basic clause structures, a few words should be said concerning the types of basic clause structure types. Dixon and Aikhenvald (2000) argue that it is possible to postulate major clause types applicable to linguistic descriptions of individual languages. That is, it is possible to represent basic syntactic structures in every language in terms of a particular configuration of a predicating element (which is most frequently verb-headed) and some set of predicate arguments expressed through nominal phrases (NPs) (see Dixon and Aikhenvald 2000: 2). Clause structures can be subdivided into types depending on the number and kind of core arguments, i.e. arguments that are obligatory for a predicate to be grammatically correct (in contrast to peripheral arguments that can be omitted without rendering the predicate grammatically unacceptable). The two major clause types are intransitive and transitive clauses; the third, though not a universal type, is represented by ditransitive clauses with three obligatory arguments. An intransitive clause has just one core argument, symbolically represented as S. A transitive clause requires two core arguments, A and O, representing a participant initiating or controlling the activity, on the one hand, and a participant affected by that same activity, on the other (Dixon and Aikhenvald 2000:

3; consider also Hopper and Thompson’s (1980) usage of the denotations A and O for the indication of “the two participants in a two-participant clause” (Hopper and Thompson 1980: 252; see also Næss 2007: 7). Aside from these two main clause types, the authors name the so-called extended clauses (including the ditransitive type), where the core structure is extended by an additional obligatory argument E (often an oblique argument). The following extended structures are proposed (Dixon and Aikhenvald 2000: 3):

- (i) Extended intransitive: S E (“typically used for seeing, hearing, liking and wanting”);
- (ii) Extended transitive: A O E (including ditransitive clauses).

Importantly, the argument types symbolized by the notations S, A, and O represent participant roles keyed to their semantic properties, which thus represent constant elements, which makes this notation a convenient means to depict argument-altering (or valence-changing) operations. Comrie (1981, 1989), who uses the notation P instead of O,¹³ gives the following characterization:

In the prototypical transitive situation, the participants are an agent and a patient, and this remains constant irrespective of the morphological or syntactic behaviour of the sentence in any individual language. We may therefore, starting originally with transitive predicates describing actions, label the agent as A, and the patient as P, so that in the sentence I hit you [. . .] irrespective of the case marking of the various noun phrases I will be A and you will be P. [. . . W]e can continue to use [A and P] even when we pass beyond prototypical transitive situations (i.e. actions) to other constructions [. . .] A and P are thus syntactic terms, whose prototypes are defined in semantic terms. (Comrie 1981: 105, 1989: 111, cited in Haspelmath 2011: 546).

As the notions S, A, and P (to stay with the Comrian symbols) are semantically based, they can effectively be implemented for the diagrammatic representation of valence-altering processes whereby the semantic roles change their syntactic positions and functions. For instance, the antipassive derivation can be represented as follows (see 2.4 for the antipassive derivation in Tima):

Figure 5. Antipassive derivation. Syntax-semantic interface

	Base transitive predicate	Derived antipassive
Participant roles	A P	S _A

¹³ See Haspelmath (2011) for a history and an overview of different approaches to the notions S, A, and P (O), their underlying argumentations, and some problematic issues.

Syntactic functions ¹⁴	Subject	Object	Subject
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The subscript A with the derived sole S argument makes clear that this argument is semantically A, i.e. an agentive argument corresponding to the underlying (i.e. transitive) A participant.

In the linguistic analysis of the Tima data, I will use the notations S, A, and P to refer to the sole participant in an intransitive clause, an agent-like, and a patient-like participant of a basic transitive clause, respectively.

1.2.3 Concluding remarks

The preceding subsections explained some theoretical assumptions and concepts relevant to the linguistic analysis of Tima verbs. I started with the chosen approach to classifying the verbs in Tima in order to discern semantic similarities among the verbs within established classes: as a possible indication of shared semantic components, I assumed the commonalities shown by groups of verbs in terms of valency alternation patterns. It was likewise mentioned that Tima, along with many other languages across the world, employs derivational affixes to change valency. Consequently, in order to study valency alternations, we are inevitably engaged in examining the functions of relevant derivational elements. And here, we are often faced with the problem that, within a given language, one and the same derivational morpheme is involved in different kinds of alternations so that it is more appropriate to speak of a ‘structure family’ or ‘cluster’ (Shibatani 2004: 1157ff), i.e. a cluster (or family) of constructions expressed by the same morphosyntactic means. The choice (e.g. by Shibatani 2004) of the metaphorical expression ‘structure family’ emphasizes the relatedness of functions expressed by a given morpheme within a family (and thus excludes incidental homophony). Such a morpheme, then, can be called multifunctional,¹⁵ i.e. having distinct but related functions with different verbs and constructions that host these verbs. Haspelmath (2003: 211) explains the susceptibility of

¹⁴ In the present work, I will use the term ‘syntactic function’ for categories like ‘subject’ and ‘(direct) object’ (following Dik 1997).

¹⁵ Following Haspelmath (2003), in the present analysis, the terms function and multifunctionality are used to avoid the confusion connected with the terms ‘sense’ and ‘polysemy’.

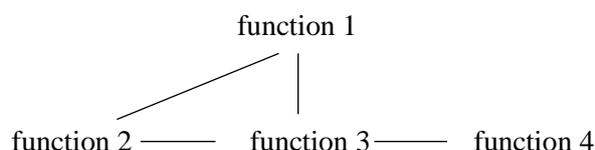
grammatical morphemes to have several functions by their inherently “more abstract and general meanings” in comparison to “content words”.

From a crosslinguistic perspective, a good example of a large cluster of constructions employing derivational morphology is known by the term ‘middle’, a linguistic category that, speaking very generally, describes an event as being in the subject’s sphere. Syntactically, the focus on the subject is often reflected in detransitivized structures associated with middle situation types (for detailed accounts, see Geniušienė 1987; Klaiman 1991: 44 ff.; Kemmer 1993; and Kazenin 2001). The middle cluster may include such detransitivized categories as the anticausative, reflexive, reciprocal, antipassive, autobenefactive (reflexive-benefactive), etc.

As will be seen in the chapters below, valency alternations in Tima likewise employ multifunctional derivational morphemes. To account for the multiplicity of functions of derivational morphemes in Tima, the linguistic analysis presented below relies on the tenets of the cognitively oriented approach to linguistic phenomena. One of the most relevant aspects of such approaches is the fluidity of linguistic categories connected to a tight interrelationship between different parts of a language system. Such fluidity results in the absence of discrete and clear boundaries between the categories, allowing for ambiguities and overlaps between individual categories, including polysemy and multifunctionality (see Janda 2015: 139). Janda (2015: 139), referring to Langacker (2006), calls for due regard for linguistic models “that emphasize continuousness of phenomena” rather than models that rely on categorial discreteness. Indeed, discrete models miss important aspects of semantic relatedness between categories that make them a useful tool for comparative research between various languages, especially with respect to functional elements such as derivational morphemes.

One way of representing the semantic relations between the diverse functions fulfilled by the morphemes (i.e. to depict the patterns of multifunctionality) is the semantic map approach advocated, among others, by Haspelmath (2003). The author gives the following definition of a semantic map: “A semantic map is a geometrical representation of functions in ‘conceptual/semantic space’ which are linked by connecting lines and thus constitute a network” (Haspelmath 2003: 213). So, the functional scope of a multifunctional element may be depicted by means of the following example diagram:

Figure 6. Semantic map schema (after Haspelmath 2003: 216)



The connecting lines refer to assumed closer relationships between the functions; however, they are optional and can be omitted (Haspelmath 2003: 216, referring to Anderson 1986). The main goal is to show a contiguous conceptual-semantic space where the related functions reside without necessarily establishing degrees of mutual closeness between individual functions.

The term ‘semantic map’ is used by Kemmer (1993: 201) in her account of middle constructions in the world’s languages; Croft (2001) uses the term ‘conceptual space’ (emphasizing the fluid nature of the constituents that occupy such a space). Since, as mentioned above, the valency-changing morphemes in Tima exhibit features of multifunctionality, the method of semantic map representation will be utilized in summarizing sections of the chapters dealing with individual morphemes. As noticed by Haspelmath (2003: 232), a compelling advantage of the semantic map approach is that there is no requirement to determine one core or prototypical function (or use). As a matter of fact, postulating a prototypical function of a certain morpheme in a given language may turn out to be far from straightforward. What criteria should we apply to make such a choice? The productivity of a morpheme (in terms of a regular pattern of formation)? But what should we do when, for instance, two or more functions are equally productive? Or should we take the number of attested cases of a particular usage as a criterion for prototypicality? But how can we be sure that the attested cases are representative of the actual distribution in the language? Even more complicated is the postulation of a prototypical function of a morpheme in less-described languages where diachronic evidence is lacking. The semantic map approach does not concern itself with all these questions; rather, it aims to unearth the semantic relations exhibited by a certain morpheme found in diverse constructions in a given language as observed by the researcher, and thus to help define the meaning content of the morpheme in a more exhaustive way. And lastly, since it is semantically based, the semantic map approach presents a suitable method in the domain of language comparison, including in the investigation of diachronic and genetic relationships between less-described and less-recorded languages for which the genetic affiliations are controversial.

1.3 The structural properties of Tima

The present section introduces the general structural properties of Tima with a focus on those aspects that are relevant to understanding the analytical data presented in the study. As the investigation revolves around verbal behavior, particular attention is paid to verbal categories. Other domains are touched on briefly and references to detailed studies dealing with these domains are provided. The information outlined here recapitulates, to a large extent, the linguistic studies conducted over more than ten years by the participants of the project Documenting the Tima Language, introduced above in 1.1.

1.3.1 Phonology and phonetics

This section introduces the phonemic inventory of Tima and describes common morphophonological processes. Only general information will be presented here; for detailed accounts of phonological and phonetic aspects and processes in Tima see Bashir (2010) and Dimmendaal and Schneider-Blum (in prep.). Bashir (2010) also provides a detailed description of articulatory phonetics associated with the phonemic inventory of consonants and vowels in Tima (including acoustic measurement data collected with the help of the Praat program). The section is organized as follows. First, section 1.3.1.1 describes the vowel inventory and related phonological processes. The next section, 1.3.1.2, introduces the Tima consonants, followed by a brief discussion in section 1.3.1.3 of morphophonological processes relevant to the understanding of the linguistic examples in the following chapters.

1.3.1.1 Vowels

The Tima vowel inventory is comprised of twelve distinct phonemes that can be subdivided into two sets according to the \pm ATR rules of articulation, the one set +ATR, and the other

-ATR. The vowel phonemes are shown next (from Dimmendaal and Schneider-Blum, in prep.: ch. “Phonology”):

Table 3. Vowel phonemes in Tima

	[+ATR]			[-ATR]		
	front	central	back	front	central	back
close	i	ɨ	u			
close-mid	e		o	ɪ	ə	ʊ
open-mid		ʌ		ɛ		ɔ
open					a	

The symbols in Table 3 correspond to the orthographic representation used in the linguistic analysis below.

Generally, within word boundaries (including affixes), the ATR (advanced tongue root) harmony rule applies, i.e. the vowels are either [+ATR] or [-ATR]. An example is *céŋ-wùdál* (IPFV3-burn) ‘3P is burning’ as opposed to *céŋ-wòdáná* (IPFV3-cry) ‘3P is crying’, where in the first case, the vowel of the prefix adjusts to the [+ATR] value of the root vowels and in the second case, the prefix vowel is [-ATR] as the root vowels are [-ATR]. There are some exceptions, though:

- (i) the vowel of the perfective prefix *aN-* (see 1.3.4.2.2 below on TAM marking in Tima) remains unchanged regardless of the following vowel, e.g. *àŋ-wùdál* (PERF3-burn) ‘3P has burnt’, where the prefix vowel is [-ATR] even though the root vowels are [+ATR];
- (ii) the verbal instrumental suffix *-áá* (see 1.3.4.3.3) likewise does not change irrespective of the environment, e.g. *túlùnàk-áá ihwáà* (visit-INS people) ‘Visit (your) people!’
- (iii) Clitics, such as the locative applicatives (=táŋ/=yaŋ, for 3rd person) and bound pronominal morphemes for the 2nd person, both singular and plural (see 1.3.4.2.1),

maintain their inherent ATR feature value, e.g. *nλη-í=ṭájη* (carry-HT=LOC3P) ‘Help him/her carry (sthg.)!’

Tima is a tonal language with two distinctive tones, high and low, and contour tones, rising and falling. The rising and falling tones are primarily restricted to sequences of two identical short vowels (see below). Furthermore, such processes as tone downstep (i.e. the pitch lowering of the tone of the second vowel in a sequence with an identical tone) and its counterpart upstep (the upward pitch shift) can be observed in speech flow (for details see Bashir 2010; Dimmendaal and Schneider-Blum, in prep.: ch. “Phonology”).

The tone is a lexically and grammatically relevant phonological feature in Tima. With respect to lexical distinctions, lexical entries with different tonal patterns bear distinct meanings, e.g., *cílóm* ‘piece of rubbish’ vs. *cílòm* ‘kind of wild cat’. On the structural level, the tone plays a differentiating role in the following contexts:

- a) word class contrast. For example: *ihì* ‘milk’ (noun, plural) vs. *ihì* milk (imperative, singular);
- b) pluractional marking on verbs. For example: *dòyá* ‘steal it’ vs. *dóyà* ‘steal repeatedly’ (see 1.3.4.4 on pluractionality marking in Tima).

Phonetic vowel length is not considered to represent a phonemic feature and long vowels are therefore depicted structurally as a sequence of two short vowels. In some cases, the synchronically attested long vowels are assumed to result from the historic weakening of intervocalic consonants, a hypothesis that is supported by the comparative data from the related languages Katla and Julut. For example, the word for ‘hair’ in Katla, *kvǝm*, with an intervocalic *g*, corresponds to Tima *káàm* with a long root vowel (for details, see Dimmendaal and Schneider-Blum, in prep.: ch. “Phonology”).

1.3.1.2 Consonants

Tima has 22 consonant phonemes, shown in the table below (from Dimmendaal and Schneider-Blum, in prep.: ch. “Phonology”).

Table 4. Consonant phonemes in Tima (IPA symbols)

Manner of articulation		Place of articulation						
		labial		coronal			dorsal	
		bilabial	dental	alveolar	retroflex	palatal	velar	glottal
Obstr.	Plosives	p	t̪		ɽ	c	k	ʔ
		b		d		ɟ	g	
	Implosives	ɓ						
	Fricatives		ð					
							h	
Sonor.	Nasals	m		n		ɲ	ŋ	
	Lateral liquids			l				
	Central liquids			r	ɽ			
Glides		w				j		

The IPA symbols presented in Table 4 are also used as orthographic symbols to represent linguistic data in the present dissertation. The following three phonemes, however, deviate from the IPA representation and are represented by the following orthographic symbols:

Table 5. Consonant graphemes deviating from IPA symbols

IPA symbol	Tima orthography
/t̪/	<t>
/ɟ/	<j>
/j/	<y>

The consonant morphemes have different distributions in the current usage of Tima speakers. The dental fricative /ð/ ([ð]) is reported to be used by elderly speakers. The younger generation employs the glide /j/ ([j]) instead of /ð/ ([ð]), represented by the orthographic symbol <y> in written texts. For example:

	Older generation	Younger generation
PRON1PL.INCL	<i>inèèð</i>	<i>inèèy</i>

Other rather rarely attested consonants are:

- voiced velar plosive /g/, e.g. *gíŋ* ‘all’ ;
- the voiced palatal stop /j/ (orthographically represented as <j> in Tima examples). Generally, this consonantal phoneme is used with Sudanese Arabic borrowings, e.g. *ájàlà* ‘bicycle’;
- another sound imported from Arabic, together with the hosting loanwords, is the fricative [f], e.g. *fòndòk* ‘mortar’ from Arabic *funduk* (see Dimmendaal and Schneider-Blum (in prep.: ch. “Phonology”) on traces of Arabic influence on the phonological system of Tima);
- the glottal stop /ʔ/, e.g. *átòʔàŋ* ‘above, over’;
- the implosive /ɓ/ is only attested with single words, e.g. *ʔihìbá* ‘oil’.

The last note concerns some regular realization patterns of the imperative verb forms that are based on roots starting with the consonants *k* or *c*. With such verbs, the loss of the root-initial *k-/c-* in the imperative is quite regularly attested; in inflected verb forms, however, the root-initial *k-/c-* is always present. Consider the following contrastive pair for illustration:

(6) <i>píná</i>	<i>cèŋ-kálàk</i>	vs.	<i>álàk!</i>
PRON3SG	IPFV3-eat		eat
	‘(S)he is eating.’		‘Eat!’
	(03.03.07-2.wav)		

The plural imperative form differs from the singular imperative in that the 2nd person prefix precedes the root; nevertheless, the *k-* of the root is not realized: *nà-y-álàk!* (2SG-EP-eat) ‘Eat!’ (2PLUR); the person prefix is separated from the root through the insertion of the epenthetic glide *-y-* (see 1.3.1.3 below on the epenthetic elements). In the present study, the base forms of verbs exhibiting this pattern (i.e. loss of the initial *k-/c-* in the imperative forms) will be represented with the initial *k-/c-* in brackets, e.g. *(k)álàk* ‘eat’.

1.3.1.3 Morphophonological processes

Among the morphophonological processes characteristic of Tima, the following have special relevance for the representation of the linguistic data in the present dissertation (see Bashir 2010; Dimmendaal and Schneider-Blum, in prep.: ch. “Phonology” for a comprehensive overview):

i) Lenition, or consonant weakening. Consonant weakening mainly involves the consonant phonemes /p/ and /t/ and is observed with nouns in singular-plural pairs. The plural formation with nouns involves the prefixation of the plural marker *i-/I-* (see 1.3.3). The /p/ and /t/ of the singular noun forms change to /w/ and /ɾ/, respectively, due to their weakening, which is influenced by the plural prefix. For example, *pòkà* ‘knife’ / *í-wókà* ‘knives’, *tòòr* ‘pot’ / *í-ɾòòr* ‘pots’.

ii) Epenthetic element insertion. Two epenthetic elements in Tima are the glides *-y-* and *-w-*. An epenthetic element may be inserted to separate a vowel sequence at the morpheme boundary in two cases: either between the imperative plural prefix and the root, e.g. *nà-y-áláák!* (2SG-EP-eat) ‘Eat!’ or between the verbal root and the suffix immediately following the root, when the juxtaposition results in a vowel sequence, e.g. *táɾò-w-àk* (clear-EP-AP) ‘clear the field’ (it must be noted, though, that this is not always the case and in many instances, there is no epenthetic element between two bordering vowels, e.g. *káhù-ùk* (pour-RES) ‘(it) has been poured’).

An epenthetic element following the root is realized as follows: when the preceding root vowel is [-back], the epenthetic glide *y* will be inserted, e.g. *dà-y-í* ‘touch it’. When the preceding root vowel is [+back], the epenthetic *-w-* separates the vowel sequence, as in *táɾò-w-àk* (clear-EP-AP) ‘clear the field’.

Sometimes, but rather rarely, another epenthetic element, *ə*, may be audible at the morpheme boundaries, possibly inserted for ease of pronunciation, e.g. *hólàk-ə-dá* (stay-EP-1SG) ‘I stay’.

iii) Assimilation. One of the most common assimilative processes in the inflectional verb forms is the assimilation of the prefix-final nasal consonant to the next root-initial stop in terms of the place of articulation, e.g. *céη-káláák* (IPFV3-eat) ‘3P is eating’, *cém-péèr* (IPFV3-sharpen) ‘3P is sharpening (it)’. That is, the nasal consonant in the verbal prefixes at morpheme boundaries is considered underspecified for the place of articulation; for this reason, the corresponding morphemes are represented, e.g., as *cəN-* (with *N*

representing the nasal) for 3rd person imperfective or *aN-* for 3rd person perfective (see 1.3.4.2.2 on the TAM markers on verbs).

With some verbs, the assimilation between the root-final *-a/ -ɔ* and the following transitivity marker *-i/-i* (see 1.3.4.3.1) may result in the conflation and assimilation of the two bordering vowels, so that the sequence *a- + -i* becomes *-εε-* (or *-ε-*) and *ɔ- + -i* results in *-ee-* in the verb form extended with the transitivity marker (HT); for example, *ákwà-ák* (hold-MID/REFL) ‘hold yourself’ vs. *ákwè-é* < *akwa+i (hold-HT) ‘hold it’.

The patterns of assimilation between the root vowel(s) and the vowels of the following derivational suffixes that change verbal valency (the major focus of the dissertation) are quite diverse and cannot be described by postulating well-defined principles. Due to the underspecification of the suffix vowel, the corresponding morphemes are represented as, e.g. *-Vk*, where *V* designates an underspecified vowel. The patterns of realization of the suffix vowels will be described in the chapters dealing with individual derivational morphemes.

- iv) Vowel deletion/fusion. With some verb forms, the loss of the root final vowel can be observed due to its merger with the following suffix vowel. This particular process is typical of the causative derivation (with transitivity function, see 3.2.3) and, specifically, when the root-final vowel is *-u/-o*. That the conflation occurs can be inferred from related verb forms, most commonly the alternation between the causative (i.e. transitive) and resultative verb forms (see 3.3.3 on resultatives in Tima); for example, *káhùk* (pour.CAUS) ‘pour it’ vs. *káhù-ùk* (pour-RES) ‘be poured’.

The vowel merging also occurs when the verbal instrumental suffix *-aa* (see 1.3.4.3.3) is followed by the composite morpheme *=a=ɬaŋ* (=SOURCE=LOC3P; see 1.3.4.3.5) resulting in the form *-aa=ɬaŋ* (glossed INS:SOURCE=LOC3P in the examples below).

1.3.2 General remarks on word order and argument marking properties

The basic word order in Tima is SV(O), judged by the fact that, overwhelmingly, this is the pattern followed when sentences are produced out of context. However, this order is not fixed and can be changed for various discourse and pragmatic reasons. Word orders deviating from the schema SV(O) represent marked constructions compared to the basic pattern in that they are either marked for ergativity or framed as focus constructions (see below).

When a proposition is cast in the basic word order, the constituents corresponding to the core arguments are unmarked, as demonstrated below:

- (7) *píná àŋ-kóyó-ó ìtùk*
PRON3SG PERF3-cook-HT porridge
'She prepared porridge.'
(STH20190119 CM1)

As seen in (7), the agentive participant in the subject function occupies the sentence-initial position and the unmarked direct object, expressing a patientive participant, directly follows the verb. The morphosyntactic pattern exemplified in (7), i.e. when the direct object follows the verb directly without any additional marking, represents the prototypical transitive clause coding in Tima. When a sentence also contains oblique participants, they usually follow the direct object in basic (unmarked) constructions when the clause is transitive (see ex. (9) below); alternatively, the oblique constituent follows the verb when the clause is intransitive, illustrated next:

- (8) *ì-tóó=yàŋ ì=Háámít*
1PL-pass =LOC3P DIR=Hamid
'Let us go to Hamid!'
(STH20190131 3)

Oblique arguments receive the morphosyntactic marking or “flagging” (Dimmendaal 2010a) corresponding to the thematic role of these arguments. The next table provides an overview of

the coding forms and argument types (i.e. thematic roles) that usually receive this encoding.¹⁶ The connecting element “=” indicates the proclitical morphological status of the oblique marking.

Table 6. Morphosyntactic coding (prepositional clitics) of oblique arguments

Morpho-syntactic coding	Gloss	Argument types	Example	Gloss
<i>a</i> =	SOURCE	source, possessor, partitive	<i>á=kàrtòòm</i> SOURCE=Khartoum	from Khartoum
<i>na</i> =/ <i>na</i> =	COM	comitative	<i>nà=hámít</i> COM-Hamid	with Hamid
<i>N</i> = ¹⁷	INS	instrument, manner	<i>η=kùrdì</i> INS-force	forcefully, with force
<i>V</i> = ¹⁸	DIR	recipient, goal	<i>λhùk</i> <i>ò=kwèén</i> pour DIR-bowl	pour (it) into the bowl
<i>ii</i> =/ <i>ii</i> =	BEN	beneficiary	<i>tónàk</i> <i>íi=píná</i> sing BEN=PRON3SG	sing for him/her

The next example demonstrates a clause with an oblique argument marked as an instrument; the oblique argument follows the unmarked direct object in the postverbal position:

- (9) *kààká àn-dà-y-ì kìmíná jì=còràη*
 Kaaka PERF3-touch-EP-HT SG.snake INS=SG.stick
 ‘Kaaka touched the snake with a stick.
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Information Packaging”)

¹⁶ Aside from the bound marking of oblique arguments, Tima also employs prepositional phrases and full word prepositions, i.e. *yántsr* ‘between’ (for details, see Dimmendaal and Schneider-Blum, in prep.: ch. “Minor Categories”).

¹⁷ The instrumental proclitic is a homorganic nasal *N*- that assimilates to the place of articulation of the following root phoneme.

¹⁸ Here, we are dealing with an underspecified vowel that assimilates to the first root vowel (or a glide) in terms of ATR and frontness.

When the unmarked word order is changed, i.e. when the object moves into the preverbal position and the subject comes after the verb, the subject must be marked for ergativity, which is expressed through a precliticized homorganic nasal *N=* (see Dimmendaal 2009, 2010b; Dimmendaal and Schneider-Blum, in prep.: ch. “Information Packaging”). Observe the following example pair for an illustration of contrasting marking patterns with basic word order, i.e. SVO (ex. (10)) and changed word order, i.e. OVS (ex. (11)):

- (10) *yáhhùnén* *à-mìni-í* *yábòh*
 PL.woman PERF3-cook-HT meat
 ‘The women have cooked meat.’
 (STA20200208 2)

- (11) *yábòh=é* *mìni-í* *ɲ=áhhùnén*
 meat=FOC cook-HT ERG=PL.woman
 ‘The women have cooked *meat*.’
 (STA20200208 2)

In (11), the subject marked for ergativity (*ɲ=áhhùnén* ‘women’) is demoted to the postverbal position, while the focus-marked direct object occupies the topical preverbal position (see Schneider-Blum 2018 on focus constructions in Tima).

As noted in Dimmendaal and Schneider-Blum (in prep.: ch. “Information Packaging”), of the oblique arguments, only the instrumental nominal phrase can move into the sentence-initial position. In this case, the instrumental notion is expressed on the verb by means of the verbal instrumental suffix *-aa* (see 1.3.4.3.3 below); however, the instrument noun phrase is now unmarked. The following sentence illustrates an alternative to the sentence in (9) above:

- (12) *còràṅ* *àn-dá-y-í-y-áá* *ɲ=kááká* *kàminá*
 SG.stick PERF3-touch-EP-HT-EP-INS ERG=Kaaka SG.snake
 ‘With a stick has Kaaka touched the snake.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Information Packaging”)

Note that the original subject is now marked with the ergative marking η ¹⁹ and follows the verb directly while the direct object follows the subject in the postverbal position.

1.3.3 General remarks on noun phrases

Synchronically, Tima has a restricted system of noun class prefixes, noun classes being a typical feature of Niger-Congo languages (Alamin 2012; Dimmendaal 2009, 2014, 2018).²⁰ Only two classes of noun prefixes – one for singular and one for plural noun forms – are employed productively in the current usage in Tima (in contrast with typical Niger-Congo noun classes that are associated with certain semantic properties of the nouns).

The next table shows the noun prefixes in Tima (see also Dimmendaal and Schneider-Blum in prep.: ch. “The Noun Phrase”)

Table 7. Noun prefixes (for singular and plural) in Tima

Singular	Plural	Example		English gloss
		Singular	Plural	
<i>k(V)-</i>	<i>ɪ-/i-/y-</i>	<i>k-úùh</i>	<i>y-úùh</i>	bone
<i>c(V)-</i>	<i>ɪ-/i-/y-</i>	<i>c-íbóónìn</i>	<i>ì-bóónìn</i>	girl
<i>ǰ(V)-</i>	<i>ɪ-/i-/y-</i>	<i>ǰ-àmáá</i>	<i>y-àmáá</i>	language, speech
<i>unmarked</i>	<i>ɪ-/i-/y-</i>	<i>wáǰìŋ</i>	<i>ì-wáǰìŋ</i>	owner, user

The parenthesized *V* in the singular forms represents an underspecified high vowel that assimilates to the ATR and frontness values of the first root vowel.²¹ In contrast to the singular

¹⁹ It can be observed that the nominal instrumental proclitic *N=* and the ergative marking *N=* have identical forms. It is indeed hypothesized that the ergative marking in Tima originates from the instrumental marking (see for details Dimmendaal 2010b).

²⁰ According to Dimmendaal (2014, 2018), who bases his hypothesis on comparative evidence from the closely related languages Katla and Julut, as well as other Niger-Congo languages, historically, Tima had a richer system of noun class markers. The reduced system of differentiation between noun classes synchronically is considered a result of multiple layers of restructuring processes (see Dimmendaal 2014 for details).

²¹ As explained in detail by Dimmendaal and Schneider-Blum (in prep.: ch. “The Noun Phrase”), there is a difference in the realization of the prefix vowel between the older and younger generations, summarized as follows:

prefix, the plural marking shows less variation: the plural suffix has the form *I-/i-* (according to the ATR value of the root vowel) with roots starting with consonants but tends to have *y-* with vowel initial roots. Before a high front first root vowel, the plural form might be unmarked, e.g. *k-ínλ* (sg.) vs. *ínλ* (pl.) ‘female’s brother’.

As can be observed from Table 7, the singular marking falls into four groups: with different initial consonants (*k-*, *c-*, and *ɫ*), the fourth group being prefixless. The most productive pattern is with the prefix *k(V)-*, followed by *c(V)-*. The prefix *k(V)-* mostly occurs with roots that have a high central or back first vowel; the roots with a front first vowel, as a rule, receive the *c(V)-* singular prefix. There are, however some exceptions to these general rules, e.g. *k-ínλ* ‘female’s brother’ with *k-* before the front vowel, *c-òràŋ* ‘stick’ with the *c-* prefix before the high back vowel.

The *ɫ(V)-* prefixed nouns in the singular are not as numerous and this pattern is considered to be unproductive synchronically.

By contrast, the unmarked singular forms, i.e. where the singular noun form is identical to the root, are relatively high in number. Their plural forms receive the marking *i-/I-/y-* according to the rules described above.

Nouns with *t-* and *w-* initial roots exhibit the following peculiarity in their plural formation: when the plural forms have the prefix *i-/I-*, the root-initial *t-* and *p-* undergo a process of weakening in the intervocalic position and change to *ɾ-* and *w-*, respectively:

Singular	Plural	English gloss
<i>tóðr</i>	<i>ì-ɾóðr</i>	waterpot
<i>pìrɿúú</i>	<i>ì-wìrɿúú</i>	rhinoceros

Nouns with roots starting with other consonants are not affected by the weakening rule, e.g:

Singular	Plural	English gloss
<i>wáɿŋ</i>	<i>ì-wáɿŋ</i>	owner, user
<i>làwó</i>	<i>ì-làwó</i>	river, stream

Prefix vowel		First root vowel	
Older generation	Younger generation		
central <i>ə/i</i>	front <i>ɪ/i</i>	<i>ɪ, ɛ, i, e</i>	front
	central <i>ə/i</i>	<i>ə, a, ɨ, ʌ</i>	central
back <i>ʊ/u</i>	back <i>ʊ/u</i>	<i>ʊ, ɔ, u, o</i>	back

ηὸνάη *ì-ηὸνάη* work, task

The last remark in this section is on the structure of complex noun phrases in Tima, i.e. nouns accompanied by modifiers. Complex noun phrases have the order *Noun(head) Modifier*. Most frequently occurring as modifiers are adjectives, numerals, and nominal complements (building compound nouns; see Schneider-Blum 2011 on noun compounding in Tima). As for the nominal complements, when used as modifiers, these lexemes follow the same pattern of number marking as that just described for nouns in isolation: they take one of the singular prefixes (Table 7) and *í-/ì-/y-* in the plural.

The adjectival and numeral modifiers agree in number with the head noun, i.e. they take singular marking when the head noun is singular, and plural marking when the head noun is in the plural.²² Consider the following complex noun phrases in the singular and in the plural (note that the singular marking on the head noun and the modifying element do not necessarily coincide, since the particular form on the noun is phonologically determined, yet, singular marking on modifying adjectives is invariably k(V)-):

	<i>Singular</i>			<i>Plural</i>	
	Adjective modifier				
(13)	<i>Ø-pòkáá</i>	<i>kí-hikér</i>		<i>í-wòkàá</i>	<i>ì-hikér</i>
	SG.knife	SG-sharp		PL-knife	PL-sharp
	Numeral modifier				
(14)	<i>húndúúk</i>	<i>ὴ=ki-dìì</i>	<i>kí-tíín</i>	<i>í-bà</i>	<i>ì-hwàáy=yèén</i>
	hop	INS=SG-leg	SG- one	PL-child	PL-three=LOC1SG
	‘Hop on one leg!’			‘I have three children.’	

²² Adjectives in Tima can also be used in predicative function (for distributional patterns see Dimmendaal and Schneider-Blum, in prep.: ch. “The Noun Phrase”). In this case, the number marking pattern differs from the usage of adjectives as noun modifiers: the singular prefix with a predicatively used adjective is invariably *à-*, while the plural prefix is *ì-/ì-*. For example:

<i>àn-cáák</i>	<i>à-y-àdí</i>	vs.	<i>àn-cáák</i>	<i>ì-y-àdí</i>
PERF3-become	STAT.SG-EP-ripe		PERF3-become	STAT.PL-EP-ripe
‘it has become (somewhat) ripe’			‘they have become (somewhat) ripe’	

There is also a tonal difference between the two usages: while the modifying usage exhibits a high tonal pattern, in the predicative function, the adjectives (also called statives) mostly have LH or all low tone patterns (see Dimmendaal and Schneider-Blum, in prep.: ch. “The Noun Phrase”).

Nominal complements, on the other hand, retain their own number value. Consider the following compound noun for an illustration:

- (15) *y-ából* *kwíík*
 PL-leaf SG.ziziphus
 ‘leaves of *Ziziphus spina christi*’

In (15), the nominal complement is in the plural even though the head noun is in the singular.

For a detailed account of nominal morphology and noun formation processes in Tima, see Alamin (2012), Schneider-Blum (2011), and Dimmendaal and Schneider-Blum (in prep.:ch. “The Noun Phrase”).

1.3.4 Verbal categories

1.3.4.1 Verb structure

The verb in Tima is the most complex word class in terms of its structural properties. It contains thirteen slots that can be occupied with inflectional and derivational elements (Dimmendaal 2009, 2010; Alamin 2012: 70; Alamin et al. 2012). The simplest verbal form, comprising just the bare verbal root, is the singular imperative form, for example, *dáláá!* ‘play!’, since it does not contain any inflectional morphology marking such categories as person, number, and TAM. Aside from the inflectional morphology expressed on the verb, the complexity of Tima verbs is conditioned by a rich derivational morphology, including suffixes and enclitics. Before moving to the discussion of these inflectional categories, as well as the derivational categories, the general structure of the verb in Tima will be presented.

Figure 7. The structure of the verb in Tima

MORPHEME FUNCTION	MORPHEME TYPE
Negation	Proclitic
Aspect/ Mood	Proclitic
Pronominal subject (S/A)	Prefix
Tense (Future)	Prefix
ROOT	
Derivation 1 (Transitivity)	Suffix
Derivation 2 (Antipassive, Causative, Middle/reflexive, Anticausative, Resultative)	Suffix
Derivation 3 (Ventive)	Suffix
Derivation 4 (Instrumental)	Suffix
Pronominal Locative	Enclitic
Benefactive	Enclitic
(Ergative) pronominal subject (S/A)	Enclitic
Pronominal object	Enclitic
Negation	Enclitic

Negation marking is composed of the preverbal element *kV-*, which precedes all other morphemes before the root, and the verb-final enclitic *-aŋ* (with the allomorphs *-aŋ*, *-oŋ/-ɔŋ*) that follows all other morphemes after the root, e.g.:

(16) *kʰ=hʰslàk-ə=dá=àŋ*

NEG=stay-EP=1SG=NEG

‘I cannot stay.’

(Dimmendaal and Schneider-Blum, in prep.: ch. “Pronouns”)

Further categories expressed on the verb can be divided into inflectional (i.e. not meaning-changing but obligatory) and derivational (i.e. meaning-related but not obligatory) types. The next sections, 1.3.4.2 and 1.3.4.3, deal with these types of verbal categories.

1.3.4.2 Inflectional categories

Person and number marking (described in 1.3.4.2.1) fall under the rubric of inflectional categories encoded on the verb in Tima, as do the TAM categories, to which section 1.3.4.2.2 is devoted.

1.3.4.2.1 Person and number

Tima has both independent personal pronouns and bound pronominals expressed on verbs in the form of clitics (see Alamin 2012: ch. 4.3; Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”). Bound pronominals are obligatory, whereas independent pronouns can mostly be omitted (see Schneider-Blum 2013 on the usage of independent personal pronouns). That is, the information concerning the person and number of predicate participants is sufficiently expressed by the bound pronominals to yield grammatically correct sentences. To continue the discussion, first, the inventory of the bound pronominal should be observed (for convenience, the corresponding independent pronouns are provided in the rightmost column). Explanations are given immediately below.

Table 8. Bound pronominal marking on verbs in Tima

	SUBJECT PREFIX (S, A)	SUBJECT (S, A) / OBJECT ENCLITIC	ERGATIVE SUBJECT ENCLITIC	INDEPENDENT PERSONAL PRONOUNS
1SG	$\emptyset/N=$ ²³	$=d\lambda/=da/=d\omega$	$=n\lambda/=na/=n\omega$	<i>kídá/òhònówá</i> ²⁴
2SG	$a=$	$=\eta a\eta$	$=\eta a\eta$	<i>\eta à\eta</i>
3SG	$\emptyset/N=$	\emptyset	\emptyset	<i>píná</i>
1PL INCL	$i=/i=$	$=n\epsilon y$	$=n\epsilon y$	<i>ìnèèy</i>
1PL EXCL	$i=/i=$	$=nin$	$=nin$	<i>ìnììn</i>
2PL	$na=/n\lambda=$	$=nan$	$=nan$	<i>ìnààn</i>
3PL	$\emptyset/N=$	\emptyset	\emptyset	<i>ìhìná</i>

²³ *N* (here and in the following paradigms) is only realized if the stem initial consonant is a plosive (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”).

²⁴ The alternative form *òhònówa* for the 1st person singular is generally used by elderly speakers (see Schneider-Blum 2013: 283).

As can be observed from Table 8, there are three sets of bound pronominals: the proclitics referring to the syntactic subject (including both S and A roles), and two sets of enclitics. The pronominal marking is differentiated for number, i.e. singular and plural bound pronominals have distinct coding (except for the 3rd person; see below). The preverbal person marking (i.e. the proclitics) is identical: $\emptyset/N=$, for the 1st person singular and 3rd person singular and plural. Likewise, preverbally, no distinction is made between the 1st person inclusive vs. exclusive, in contrast to the postverbal marking by means of enclitics, which differentiate between the inclusive and exclusive marking of the 1st person plural ($=ney$ vs. $=nin$, respectively). Notably, the free pronouns also differentiate between the two forms of the 1st person plural (see Table 8 above).

The first set of enclitics (Table 8) is employed when the corresponding predicate structure is SV(O), i.e. the basic clause structure in Tima. For example:

- (17) $\acute{y}=kúmún=dá$ *Àbéèr*
 1SG=see=1SG Abeer
 ‘I met Abeer.’
 (Schneider-Blum 2013: 285)

The clause structure represented in (17) is SVO. The S argument refers to the speaker, 1st person singular. Since the free pronouns are not obligatory, as mentioned earlier, only the bound marking on the verb (the proclitic $\acute{y}=$ and the enclitic $=dá$) discloses the referent of the subject argument.

As indicated in Table 8, this first set of enclitics is used for marking both subject and object referents. When a predicate contains pronominal marking on the verb to index the subject as well as the object, the subject bound marking precedes that of the object, e.g.:

- (18) $\grave{a}-hí-\grave{\imath}=d\grave{a}=\eta\grave{\alpha}\eta$
 PERF3-know-HT=1SG=2SG
 ‘I know you.’
 (2011_06_30_5_13.wav)

The second set of enclitics (only used for subject marking) represent ergative marking (see 1.3.2 above); here the bound pronominals are preceded by a homorganic nasal $-N-$ (Dimmendaal 2009: 339). In this ergative set, only the 1st person singular has a distinct form differing from

the regular marking; other elements do not alternate between the regular and the ergative marking since they have an initial nasal in their regular forms. The ergative enclitic marking is chosen when the basic structure SVO changes to OVS, e.g. to focus the O argument (as in (19) below) or else when the action itself is focused upon (see also Dimmendaal 2009: 345).²⁵

- (19) *ηὰὰη=ά* *húm-άά=yάη=nά* *cídλ*
 2SG=FOC depend-INS=LOC3P=1SG.ERG body
 ‘I depend on *you*.’

(Schneider-Blum 2013: 285, glossing modified according to new conventions)

It is noticeable that both sets of enclitics (i.e. regular and ergative) contain no marking for the 3rd person, which is indicated by the sign Ø in Table 8 (this is called zero-marking in the literature). That languages with bound pronominal marking lack bound morphemes for indexing 3rd person is quite a widespread phenomenon (see e.g. Siewierska 2004). In Tima, generally, there is no confusion associated with zero-marked 3rd person, since the other two person categories or speech act participants are unequivocally differentiated. That is, the absence of the bound person marking on the verb implies the default interpretation – that the argument of the verb refers to the 3rd person, e.g.:

- (20) *cén-cìén* *cìḡ*
 IPFV3-rinse cloth
 ‘(S)he is rinsing the cloth.’
 (STH20190116)

The only possible ambiguity concerns the number of the referent of the zero-marked argument as there is no formal distinction in these terms for the 3rd person. Usually, context disambiguates this indeterminacy. Otherwise, the speakers can always resort to the free pronouns, *pínά* (SG) or *ihínά* (PL) to make it clear whether singular or plural is meant.

Aside from the bound morphemes that express the person reference of the core arguments (i.e. S, A, and O), Tima has another kind of bound pronominals, called locative pronouns (see Alamin et al. 2012; Schneider-Blum 2013; Dimmendaal and Schneider-Blum, in prep.: ch. “Pronouns”). These are used to express reference to oblique arguments (most commonly, Goal,

²⁵ Ergative marking pertains likewise to NP arguments in S/A functions (see Dimmendaal 2009 on ergativity in Tima).

Location, and Recipient). For introductory purposes, I will limit their description to the presentation of their paradigms; for detailed accounts see Schneider-Blum (2013) and Dimmendaal and Schneider-Blum (in prep.: ch. “Pronouns”). Locative pronominals are represented in two sets, as shown in the next table:

Table 9. Locative pronominals in Tima

	y-set	ɬ-set
1SG	=yɛɛn	=ɬɛɛn
2SG	=yaan	=ɬaan
3SG	=yaŋ	=ɬaŋ
1PL INCL	=yɛɛy	=ɬɛɛy
1PL EXCL	=yiin	=ɬiin
2PL	=yaan	=ɬaan
3PL	=yaŋ	=ɬaŋ

Most immediately observable is the formal similarity between the two sets of locative pronominals; they differ only through the initial elements of each set: *y* and *ɬ*. Interestingly, these distinctive formatives correspond to the locative prefixes (or the remnants of noun class markers; see Dimmendaal 2013) used with nouns (see Alamin et al. 2012). With nouns, the prefix *y-* is used with body parts (e.g. *yàdii* ‘on the leg’ from *kidii* ‘leg’ (sg.)). The prefix *ɬ-* is generally used in petrified nominal lexemes, e.g. *ɬəmáádəh* ‘husband’.

In many contexts, the two sets can be used interchangeably, yet with regard to certain specific contexts, only one of the sets is appropriate. For example, in possessive predicates, the *y*-set is employed, as in (21) below (for the functional distribution of the two sets of locative pronominals, see Dimmendaal and Schneider-Blum, in prep.; ch. “Pronouns”).

The next examples illustrate the usage of the two types of bound locative pronominals:

- (21) *ibà ihwàáy=yèén*
 children three=LOC1SG
 ‘I have three children’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Pronouns”)

- (22) *áwòn=ɬáŋ*
 move=LOC3P

‘move (there)’ (usually accompanied by a gesture indicating the direction)
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Pronouns”)

In the verbal structure, the locative pronominals occupy the slot before the bound pronominal marking indexing core arguments (i.e. S, A, and O), as demonstrated below:

- (23) *céŋ-káh-í=yáŋ=dá* *mòftáh* *ì=káhúnèn*
 1SG:IPFV-give-HT=LOC3P=1SG key DIR=SG.woman
 ‘I gave the key to the woman’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Pronouns”)

1.3.4.2.2 TAM

In this section, such categories as tense, aspect, and mood, expressed preverbally, i.e. by means of verbal proclitics and prefixes, will be discussed. Before moving to individual categories, it must be noted that the verb is inflected for TAM when the clause does not contain focus marking on one of the clause constituents (on focus marking in Tima see Schneider-Blum 2018). Predicates of clauses with focus marking receive no preverbal TAM marking. The following contrastive sentence pair illustrates the point:

- (24) *kó-kóŋét=lí* *hòndònó* *ì=kì-dàwún*
 SG-mantis=FOC.SG sit DIR=SG-hand
 ‘There is a mantis sitting on the hand.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Minor categories”)

- (25) *cé-hòndònó=dó* *yánṣṣ* *káwùh*
 IPFV3-sit=1SG inside SG.stone
 ‘I am sitting on a stone.’
 (25.10.07_84.wav)

In (24), the syntactic subject *kó-kóŋét=lí* ‘mantis’ is focus-marked and the verb *hòndònó* ‘sit’ is used in the predicate in an uninflected (for TAM) form, which contrasts with (25) where the verb is prefixed by the imperfective marker (see below).

Tima is analyzed as having only one morphological tense marker for future (thus belonging to languages that distinguish between future and non-future tenses) and three aspectual markers (imperfective and two markers of perfective aspect: perfect and past) (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”). The past aspectual marker, realized as an underspecified vowel (*V*-), was earlier analyzed as a past tense marker indicating remote past tense (Alamin 2012: 84f); it is treated as aspectual marking in later works (e.g. Dimmendaal and Schneider-Blum, in prep.), e.g.:

- (26) *pínà* *ś-tàṛò-w-ák*
 PRON3SG PST-clean.field-EP-AP
 ‘(s)he cleaned it’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”)

Aside from the imperative briefly mentioned above, Tima has morphological markers for the potential and optative mood. These categories will be discussed in the next subsections. Only general information and relevant paradigms will be introduced here. For detailed accounts see Alamin (2012) and Dimmendaal and Schneider-Blum (in prep.: ch. “Verb”).

1.3.4.2.2.1 Tense (future) marking

The future tense marker is a prefix with the form *d(V)*-²⁶, where the vowel quality depends on the following vowel in terms of ATR value (except for the 2nd person, for which see below). The forms of the future tense marker represent portmanteau morphemes conflating the future prefix *d(V)*- with the person marking. The future tense markers for the 2nd person, both singular and plural, have constant forms, *daa-* / *dəna-* respectively. The following table contains the full paradigm of the future tense markers:

²⁶ Alamin (2012: 79) traces back the future marker *d(V)*- to the verb *di-* ‘walk, move, go’.

Table 10. The paradigm of the future tense markers in Tima

	[-ATR]-root	[+ATR]-root
1SG	<i>dV_{[-ATR](N)-}</i>	<i>dV_{[+ATR] (N)-}</i>
2SG	<i>daa-</i>	<i>daa-</i>
3SG	<i>dV_{[-ATR] (N)-}</i>	<i>dV_{[+ATR] (N)-}</i>
1PL (INCL)	<i>dii-</i>	<i>dii-</i>
1PL (EXCL)	<i>dii-</i>	<i>dii-</i>
2PL	<i>dəna-</i>	<i>dəna-</i>
3PL	<i>dV_{[-ATR] (N)-}</i>	<i>dV_{[+ATR] (N)-}</i>

The future tense marker can cooccur with the imperfective aspect marker and the potential mood marker, as illustrated below:

- (27) *Hààmít cé-dón-rəbə-ək=yáy* *í=yàbə*
 Hamid IPFV3-FUT3-join-MID=LOC3P DIR=Abo
 ‘Hamid will meet Abo.’
 (STH20200209 2)

- (28) *yànáá kə-dón-tələk=à=táy* *kìiráy*
 PL.cow POT3-FUT3-trample=SOURCE=LOC3P SG.field
 ‘The cows could trample the field.’ (e.g. when the gate is open)
 (STA20200206)

1.3.4.2.2.2 Preverbal aspect marking

The title “preverbal aspect marking” is meant to indicate that in Tima there are additional mechanisms – aside from the prefixes –that participate in the aspectual system, i.e. aspect in Tima is expressed compositionally at the level of the whole clause. I return to this issue below in 1.3.4.4.

The preverbal marking includes the marking of imperfective, or an ongoing (unbounded) eventuality (glossed IPFV in the present study), and the perfective aspect comprising the perfect (PERF) and past (PST) markers. Regarding the latter two aspectual markers, the following

distinction obtains: the past marking is employed with reference to completed events without any implication of a continuing effect holding in the present. As mentioned earlier, the perfective past aspect is morphologically signaled by an underspecified prefixed vowel (V-) glossed PST. As noted by Dimmendaal and Schneider-Blum (in prep.: ch. “Verb”), the perfective past aspect may be not marked at all. In this case, person marking immediately precedes the root, e.g. *η-kúmún=dλ yàná* (1SG-find=1SG PL.cow) ‘I found cows’.

The perfect marking indicates a state of affairs that roughly corresponds to the English perfect (as defined by Comrie 1976). That is, perfect marking is employed when “an action that took place or started in the past [...] has some effect on the current situation (like: ‘I have eaten (so I am satisfied now)’)” (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”).

In Tima, the perfect and imperfective prefixes differ in their tonal patterns only: the imperfective prefix has a high tone, and the perfect prefix has a low tone. Morphologically, the differentiation pertains only to the 3rd person singular and plural; in the imperfective paradigm, the aspect prefix is followed by the person marking, whereas the perfect prefix is used alone in the 3rd person. Furthermore, in the perfect paradigm, the 3rd person marking has an alternative form *àN*²⁷ (with fixed [-ATR] value), identical for singular and plural (see the paradigms in Table 11).²⁸

In finite verb constructions, the aspect prefix coalesces with the person marking, similarly to the future marking. Here, likewise, the prefix vowel assimilates to the next root vowel in terms of ATR (again, except for the 2nd person, which has a fixed form). The next table presents the paradigms of the imperfective and perfect preverbal morphemes in Tima (from Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”):

²⁷ The *N*- is not realized when the following root vowel is *h* or a sonorant, e.g. *à-hìbì* ‘3P has stabbed it’, or *à-móók* ‘3P has drunk (it)’.

²⁸ The form *aN*- for the 3rd person perfect is attested far more frequently than the alternating *(j)(c)è*-.

Table 11. Imperfective and perfect aspect-person marking proclitics

	IMPERFECTIVE		PERFECT	
	[-ATR]-root	[+ATR]-root	[-ATR]-root	[+ATR]-root
1SG	(j̃)(c)é(N)-	(j̃)(c)é(N)-	(j̃)(c)è(N)-	(j̃)(c)è(N)-
2SG	(j̃)(c)áá-	(j̃)(c)áá-	(j̃)(c)àà-	(j̃)(c)àà-
3SG	(j̃)(c)é(N)-	(j̃)(c)é(N)-	(j̃)(c)è-/ àN-	(j̃)(c)è- / àN-
1PL (INCL)	(j̃)(c)éé-	(j̃)(c)éé-	(j̃)(c)èè-	(j̃)(c)èè-
1PL (EXCL)	(j̃)(c)éé-	(j̃)(c)éé-	(j̃)(c)èè-	(j̃)(c)èè-
2PL	(j̃)(c)énà-	(j̃)(c)énà-	(j̃)(c)ènà-	(j̃)(c)ènà-
3PL	(j̃)(c)é(N)-	(j̃)(c)é(N)-	(j̃)(c)è-/ àN	(j̃)(c)è-/ àN

The parenthesized initial elements (*j̃*) and (*c*) indicate the possible variations in the realization of the morpheme, often depending on the personal preferences of the speakers and without any meaning difference (recall that the last *N-* refers to the person and only occurs with the following root-initial plosive). That is, the imperfective morpheme for the 1st person singular, for example, can equally have the form *é(N)-*, *cé(N)-*, or *j̃cé(N)-*.

With regard to the imperfective marking, it should be mentioned that the morpheme can be separated from the stem by the free personal pronouns; however, this occurs only in the 3rd person, e.g.:

- (29) *cé píná hédààk*²⁹
 IPFV PRON3SG jump:AP
 ‘(S)he is jumping over sthg.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

The next two paradigms of the verb *bàrh-àk* (wash-AP) ‘do the washing’ illustrate the imperfective and perfect inflections:

²⁹ This independent usage of the imperfective marker is reminiscent of the pan-Bantu auxiliary *ci* (with the variants *ki*, *si*, etc. (Torrend 1891 [2012]: 256): “There is in most Bantu languages an auxiliary which more formally than any other expresses *duration* or *non-achievement*.” As will be clear from the later discussion of the linguistic data, there are some phenomena in Tima that can be compared to corresponding phenomena in Bantu languages due to their assumed common origin in (Proto)-Niger-Congo (see Dimmendaal 2018).

Table 12. The paradigms of the verb *bārḥ* 'wash' inflected for imperfective and perfect

	IMPERFECTIVE	ENGLISH GLOSS	PERFECT	ENGLISH GLOSS
1SG	<i>cém-bārḥ-āk-ə=dλ</i>	I am washing	<i>cém-bārḥ-āk-ə=dλ</i>	I have washed
2SG	<i>cáá-bārḥ-āk=ḡāḡ</i>	You (sg) are washing	<i>càà-bārḥ-āk=ḡāḡ</i>	(You) have washed
3SG	<i>cém-bārḥ-āk</i>	(S)he is washing	<i>àm-bārḥ-āk</i>	(S)he has washed
1PL (INCL)	<i>céé-bārḥ-āk=nèèy</i>	We (incl.) are washing	<i>cèè-bārḥ-āk=nèèy</i>	We (incl.) have washed
1PL (EXCL)	<i>céé-bārḥ-āk=nìn</i>	We (excl.) are washing	<i>cèè-bārḥ-āk=nìn</i>	We (excl.) have washed
2PL	<i>cènà-bārḥ-āk=nàn</i>	You (pl) are washing	<i>cènà-bārḥ-āk=nàn</i>	You (pl) have washed
3PL	<i>cém-bārḥ-āk</i>	They are washing	<i>àm-bārḥ-āk</i>	They have washed

The preverbal morphological aspect marking (perfect or imperfective) correlates with the usage of derivational suffixes; these likewise have aspectual value, particularly the multifunctional morphemes *-Vk* and *-VI*, which are in complementary distribution in their anticausative and middle functions and which contribute to the overall aspectual value of a clause (see 3.3.4 and 3.3.5; see also 1.3.4.4 on pluractionality).

The aspectual preverbal making, being an inflectional category, regularly applies to all verbs. However, individual verbs are not compatible with the imperfective marking, while the perfect forms are always possible. For example, the verb *kúmún* 'see, find, meet' does not allow the imperfective form **céḡ-kúmún*, with the intended meaning '3P sees/finds/meets it (right now)'; only the perfect form *àḡ-kúmún* '3P has seen/found it' is possible. (See Appendix for the possible forms of verbs analyzed in this study.)

1.3.4.2.2.3 Mood marking

This section briefly describes the potential (preverbal marking *kV-*) and optative (*mV-*) mood marking on the verb in Tima. In the verbal structure, these morphemes occupy the same position as the aspect markers just described; therefore the mood markers and aspectual markers are mutually exclusive.

Potential mood marking

The potential mood is an irrealis mood that designates an eventuality that may possibly occur in the future but is not yet actualized. The potential mood marker has the form *kV-*, where the

V represents an underspecified vowel. The potential proclitic also merges with the person marking, the realization patterns being similar to those of the morphemes marking future tense (1.3.4.2.2.1) and aspect (1.3.4.2.2.2). The vowel quality in terms of ATR depends on the ATR value of the root vowel(s). The only exception here is again the 2nd person, both singular and plural, which has constant forms. The paradigm of the potential forms is presented below:

Table 13. Potential mood marking in Tima

	[-ATR]-root	[+ATR]-root
1SG	<i>kV_[-ATR](N)-</i>	<i>kV_[+ATR](N)</i>
2SG	<i>kaa-</i>	<i>kaa-</i>
3SG	<i>kV_[-ATR]-</i>	<i>kV_[+ATR]-</i>
1PL (INCL)	<i>kii-</i>	<i>kii-</i>
1PL (EXCL)	<i>kii-</i>	<i>kii-</i>
2PL	<i>kəna-</i>	<i>kəna-</i>
3PL	<i>kV_[-ATR]</i>	<i>kV_[+ATR]</i>

The next sentence exemplifies the potential mood marking in a clause:

- (30) *kʰ-dʒn-tʃɔh-ə̀k=à=táŋ*
 POT-FUT3-burst-ACAUS.ATEL=SOURCE=LOC3
 ‘It can burst.’ (is burstable)
 (STA20200206)

As seen in (30), and as mentioned in section 1.3.4.2.2.1, the potential mood marking can cooccur with the future tense marking in one inflected verb form.

Optative mood marking

The optative mood is expressed by means of the proclitic *mV-*, which again is a portmanteau morpheme that combines information on mood and person. The meaning associated with the optative mood marking is that of wishing or hoping regarding some future action and can be translated into English as ‘may’, as in the following example:

- (31) *kwààrśk m̀-ṭúyá-y=î k̀d̀àwá ḡ=kúpúlúḡ*
 God OPT3-open-EP=APPL grave INS=width
 ‘may God extend the graveyard for (them) (lit.: may God open the
 grave with regard to width for (sb.))’ (blessing for the deceased)
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”)

The next table shows the paradigm of optative mood marking in Tima.

Table 14. Optative mood marking in Tima.

	[-ATR]-root	[+ATR]-root
1SG	<i>mV_[-ATR](N)-</i>	<i>mV_[+ATR](N)</i>
2SG	<i>maa-</i>	<i>maa-</i>
3SG	<i>mV_[-ATR]-</i>	<i>mV_[+ATR]-</i>
1PL (INCL)	<i>mi-</i>	<i>mii-</i>
1PL (EXCL)	<i>mi-</i>	<i>mii-</i>
2PL	<i>mana-</i>	<i>mana-</i>
3PL	<i>mV_[-ATR]</i>	<i>mV_[+ATR]</i>

Similarly to the imperfective aspect marking (see 1.3.4.2.2.2), the potential mood morpheme may be used as a free morpheme, separated from the verb by a free personal pronoun:

- (32) *m̀ cidá kámùh-ù=ḡàḡ*
 OPT3 body leave-EP=2SG
 ‘may the fever leave you’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”)

Notice that, despite its free status, the ATR value of the optative morpheme vowel still corresponds to the ATR value of the verbal root; in (32) it is [+ATR].

In subordinate clauses, the potential mood marker allows (is ambiguous between) a sequential and a purposive interpretation (Alamin et al. 2012: 28), as demonstrated in (33):

- (33) *àyí màà-kót-ḡḡ*
 go.IMP.SG OPT2SG-take-HT.VEN
 ‘go and/to take it and come’

(Alamin et al. 2012: 28, glossing modified according to most recent conventions)

1.3.4.3 Derivational categories

The derivational elements in Tima all follow the verbal root. Derivational elements include suffixes and clitics, and they have each a fixed position in the verbal structure (see Dimmendaal 2010; Alamin 2012; Alamin et al. 2012; Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”). Table 15 below shows the derivational morphemes in Tima and their structural position within a verb form; the second slot can be occupied by three mutually exclusive multifunctional derivational morphemes.

Table 15. Verbal derivational morphemes in Tima

slot 1		slot 2		slot 3		slot 4		slot 5	
form	function	form	function	form	function	form	function	form	function
<i>-i/-ɪ</i>	HT	<i>-ak/-ak</i>	AP/ MID-REFL/ REC	<i>-Vŋ</i>	VEN	<i>-aa</i>	INS	<i>-ii/-ii</i>	BEN
		<i>-Vk</i>	CAUS/ ACAUS/ RES/ MID						
		<i>-Vl</i>	ACAUS/ MID						

In what follows, the derivational morphemes will be discussed in the order of their positions in the verb structure. (Here, only the general information necessary to following the linguistic data presented in the analytical part will be provided. For detailed accounts see Alamin 2012; Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”.)

1.3.4.3.1 Transitivity marker

The first slot is occupied by the transitivity suffix *-i/-ɪ*. The transitivity suffix may also be realized as *-o/-ɔ* or *-e/-ɛ* due to assimilation processes; in rare cases, the suffix is realized as *-y* (see below). The ATR value is determined by the preceding root vowel. The glossing HT (high transitivity) is intended to emphasize its usage in constructions expressing a higher degree of transitivity, as opposed to those with lower transitivity, which in Tima are marked with the

suffix *-a*. The low transitivity marking is extremely rare in Tima and is attested with just a few verbs (see Alamin 2012: ch. 4.5.1.1; Dimmendaal and Schneider-Blum 2018: § 2.2 for a discussion of high and low transitivity marking in Tima and examples).

The assignment of the transitivity marker to derivational categories is due to its lexical determination: the marker applies to certain verbs in transitive constructions that describe telic events with a singular NP in the direct object position (on the constituent order in Tima see 1.3.2 above). The counterpart, expressing an atelic event and/or having a plural direct object, is never marked with the transitivity suffix; in this case, the verbal root is either unmarked or, less often, the pluractional root form is used (see 1.3.4.4 below). Consider the following example pair for illustration, where (34) is construed as a telic event (perfect morphology and singular direct object NP) marked for transitivity, whereas the predicate in (35) is construed as an atelic event through the usage of the imperfective morphology; the verb has no transitivity marker in this case:

- (34) *cíbóónín àη-kòχòm-í kùtúk*
 SG.girl PERF3-cut-HT SG.bread
 ‘The girl has cut the bread.’
 (STH20200203 5)

- (35) *cíbóónín céη-kòχòm kùtúk*
 SG.girl IPFV3-cut SG.bread
 ‘The girl is cutting the bread.’
 (STH20200203 5)

In individual cases, the marker is realized as the glide *-y-*; in all attested cases, this form occurs when the suffix is followed by the suffix *-ak/-ak* (discussed in chapter 2) or *-Vk* (described in chapter 3):

- (36) *kλhúnèn àη-kópá-y-àk cíbà kùrùm*
 SG.woman PERF3-hold-HT-MID/REFL SG.child hugging
 ‘The woman has hugged the child.’
 (STH20190126 1)

- (37) *kλhúnèn céη-kópá-àk cíbà kúrúm*

SG.woman IPFV3-hold-MID/REFL SG.child hugging

‘The woman is hugging the child.’

(STH20190126 1)

(38) *kλhúnèn àη-kspá-àk íbλ kúrím*

SG.woman PERF3-hold-MID/REFL PL.child hugging

‘The woman has hugged the children.’

(STH20190126 1)

The sentence in (36) is a telic predicate with an individuated direct object; the verb is marked with the suffix *-y* (i.e. the allomorph of the transitivity suffix with the basic form *-i/-i*). The sentences in (37) and (38) are rendered atelic through the implementation of the imperfective morphology in (37) and the plural direct object in (38); consequently, these two verbs lack the transitive suffix.

The transitivity marker and the imperfective preverbal morphology are mutually exclusive due to their semantic incompatibility. Indeed, the distribution of the suffix *-i/-i* (with the allomorphs *-o/-o*, *-e/-e*, and *-y*) allows us to regard it as a telicity marking morpheme (cf. a cognate morpheme *-i/-e* in the closely related language Julut that marks the “singularity” of an action (Nüsslein 2020: 123f)). As pointed out by Dimmendaal and Schneider-Blum (in prep.: ch. “Verb”), “individuation of the action is the main parameter that governs transitivity marking in Tima.”³⁰ In the present study, I will use the denotations transitivity and telicity marking in reference to the suffix *-i/-i* (with allomorphs) interchangeably.

Three derivational morphemes allocated to the second slot in the verbal structure are multifunctional valency-changing morphemes:

-ak/-ak, bearing such functions as reflexive (discussed in section 2.2.1), one-participant middle (section 2.2.2), reciprocal (section 2.3), and antipassive (section 2.4);

³⁰ Dimmendaal (2018: 396) reconstructs for Proto-Katloid, the common ancestor language of Tima, Katla, and Julut, “a high transitivity marker **-I*, expressing a punctual action.” The author further assumes a cognate relationship between the Proto-Katloid **-i* and the archaic causative/transitivity marker in Niger-Congo (Dimmendaal 2018: 397).

-*Vk*, which can serve as a valency-increasing (causative, see 3.2.2) or valency-decreasing morpheme (the resultative (3.3.3), the anticausative (3.3.4), and the middle (3.3.5);

-*Vl*, which is in complementary distribution with -*Vk* in its anticausative and middle functions (see 3.3.6).

The functional distribution of these morphemes within the verbal lexicon in Tima is the main focus of the present study and will be dealt with in detail in the relevant chapters. Suffice it to note here that the three morphemes are mutually exclusive, i.e. they cannot cooccur in one verb form and their compatibility with particular verbs is lexically determined.

1.3.4.3.2 Ventive

The ventive marker, with the form -*Vη*, occupies the third slot in the structure of the verb in Tima. It expresses the meaning ‘towards the speaker’ and generally serves as a discourse marker, whereby the speaker functions as a deictic center, and the event described is presented in the relation to this deictic center (see Alamin et al. 2012; Alamin et al. 2012; Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”). The following example pair illustrates the usage of the ventive marker, with its presence in (40) indicating that the referent of the subject arrives at a place where the speaker is at the time of the denoted event:

- (39) *àn-cḁḁ* *ú=lḁḁ*
 PERF3-arrive LOC=family
 ‘(s)he has arrived / they have arrived at home (speaker is not at home)’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”)

- (40) *àn-cḁḁη* *ú=lḁḁ*
 PERF3-arrive.VENT LOC=family
 ‘(s)he has arrived / they have arrived at home (speaker is at home)’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”)

Aside from common motion verbs, the ventive suffix can attach to other verbs from different semantic fields. In this case, the ventive indicates that the endpoint of the event expressed by the verb is the location of the speaker at the speech moment (see Alamin 2012: 26f). Example (41) demonstrates the usage of the ventive with the verb *mḁḁk* ‘drink’, where the meaning input

of the ventive suffix can be described as ‘and come back (where I am)’. This additional meaning adds to the event described by the base verb *móòk* ‘drink’, resulting in a sequential proposition ‘go drink and come’:³¹

- (41) *àyí máà-móòk-îŋ*
 go.IMP.SG OPT2SG-drink-VEN
 ‘Go and/to drink and come.’
 (Alamin et al. 2012: 28)

The ventive morpheme is thus quite productive despite its specific meaning; also, it does not show any strong restrictions with regard to the lexical properties of the hosting verb bases (for the usage of the ventive suffix in various contexts see Dimmendaal and Schneider-Blum in prep.: ch. “The Verb”).

1.3.4.3.3 Verbal instrumental

The fourth slot in the verbal structure can be filled with the verbal instrumental suffix *-áá* that has a constant realization form, i.e. the vowel harmony rules do not apply with this suffix. Applied to a verb, the suffix “refers to an action involving some kind of instrument, whereby the cognitive status of the latter is active (i.e., the current focus of consciousness), accessible (textually, situationally or inferentially available), or inactive, but involving the hearer’s long-term memory in the terminology of Chafe (1987)” (Schneider-Blum and Dimmendaal 2013: 222).³² The next example will serve as an illustration:

- (42) *kààká à-lèm-í-y-áá kááyìm ìtúk*
 Kaaka PERF3-test-HT-EP-INS SG.spoon porridge

³¹ This usage is described with the term ‘alloying’ by Alamin et al. (2012: 29): “We call this conceptual conflation or expression of macro-events into one phonological word alloying.”

³² The description given underlines that the participant introduced by the verbal instrumental may not be expressed overtly, as in the following example:

á-hiyàn-áá=dá lálî
 2SG-ask-INS=1SG recently
 ‘you asked me (this) a short time ago’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “Minor categories”)

‘Kaaka tasted the porridge with a spoon.’³³

(Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”)

Aside from this primary semantic notion (i.e. instrument), the suffix *-áá* is used to introduce new participants into the argument structure, mainly of types such as Stimulus, Location, Path, and Accompaniment. In these cases, the instrumental marking is either directly attached to the verbal root or follows other verbal extensions (or their combinations), which can precede the instrumental suffix in the verbal structure (for details and examples see Veit 2018). The example below illustrates the employment of the suffix to introduce an argument denoting location:

(43) *cìhóók* *ńcén-dáà* *ń-kólàh-àk-áá* *kúrtú*
bird IPFV3-move.fast P-circle-AP-INS house

‘The bird is circling above the house.’

(Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

Furthermore, the suffix *-áá* may serve a purely syntactic function, namely as a conjunction in subordinate clauses (for details see Veit 2018: 245). For example:

(44) *ńòńán=lí* *kú=ńúún* *ńkò=yé* *dìik-àà=ńún*
work=FOC.SG SG=LOC:LOG3SG COP=REP walk:AP-INS=LOG3SG³⁴

‘(s)he has (to) work, that’s why (s)he is going’

(Schneider-Blum 2013: 294)

³³ Note that an alternative way of expressing the same meaning is to employ the nominal instrumental prefix *N-* (see 1.3.3 on the properties of NP marking in Tima):

kààká *à-lèm-ì* *ńúk* *ń=kááyim*
Kaaka PERF3-taste-HT porridge INS=spoon

‘Kaaka has tasted the porridge with a spoon’

(Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

³⁴ Logophoric marking is used to indicate the coreference between the subject of the subordinate clause and that of the main clause (for details on logophoric marking in Tima, see Schneider-Blum 2013).

1.3.4.3.4 Benefactive applicative marking

The last position in the sequence of derivational morphemes can be filled with the benefactive (or dative) enclitic =*ii*/*ii* (its ATR value corresponds to the ATR value of the root vowels). The benefactive applicative is attached to the verb to introduce into the argument structure new participants bearing a Beneficiary or Recipient role, as illustrated below:

- (45) *dúdu-w=íí=dà* *támáá* *dùmùrík*
show-EP=HT:APPL³⁵=1SG:OBJ language Tima
'Teach me the Tima language.'
(Dimmendaal 2010: 213)

As seen in (45), the benefactive applicative precedes the bound pronominal marking, i.e. when the Beneficiary/Recipient participant refers to the 1st or 2nd person realized as a bound pronominal (recall from 1.3.4.2.1 that there is no bound marking for the 3rd person). When the Beneficiary/Recipient is expressed through a free lexeme (including a free personal pronoun), the clitic is attached to this lexeme, exemplified in (46) (see Dimmendaal 2010; Alamin 2012: 109f):

- (46) *kìn-díik-i=dà* *íí=ηààη*
1SG:POT-walk-EP=1SG APPL=PRON2SG
'I can go instead of/for you.'
(Dimmendaal and Schneider-Blum, in prep.: ch. "Verb")

Observe also in example (47) that when both Agent and Beneficiary are bound pronominals attached to the verb, the Agent immediately follows the applicative marking and the Beneficiary comes next:

- (47) *kìn-díik=íí=dà=ηààη*
1SG:POT-walk=APPL=1SG=2SG
'I can go instead of/for you.'
(Dimmendaal and Schneider-Blum, in prep.: ch. "Verb")

³⁵ Here, the transitivity marker *-i* and the applicative =*ii* merge together.

- (50) *ìrání* *àŋ-kóhàt-òk=à=tání*
 PL.field PERF3-clear-RES=SOURCE=LOC3P
 ‘The fields have been cleared.’ (completely)
 (STH20190119 CM 1)

This morpheme is very productive and does not exhibit any restrictions in terms of the meaning of the hosting verb. It applies equally to transitive and intransitive verbs (and ditransitive, for that matter). Furthermore, as shown by Dimmendaal and Schneider-Blum (in prep.: ch. “The Verb”), the morpheme =*a=tání* can likewise attach to non-verbal predicates and to adjectives in comparative constructions (ex. (51):

- (51) *à-yáádá=á=tání* *á=cí=yàà*
 STAT.SG-new=SOURCE=LOC3P SOURCE=SG=DEM.DIST
 ‘it is newer than that’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

1.3.4.3.6 Petrified derivative middle morpheme -*VnV*

A small group of lexicalized verbs have been attested in the database containing a petrified derivational suffix -*VnV* (see Dimmendaal 2018: 396).

Table 16. *Lexicalized verbs with the suffix -VnV-*

Tima lexeme	English translation	Function
<i>tʃbene, tʃbanaak</i>	tread (several times)	Middle: body motion + iterative
<i>dʒmanaak</i>	swallow (several times)	Middle: ingestive verbs + iterative
<i>dɪyana</i>	laugh	Middle: bodily processes related to emotions
<i>hɔ(n)dana/hɔ(n)dɔnɔ</i>	sit	Middle: body posture
<i>hɪyana</i>	ask	Middle: mental processes/speech action
<i>howana</i>	dry	Middle: internally caused/Inchoative
<i>kimana</i>	be satiated	Middle: bodily processes
<i>mehene</i>	give up, leave	Middle: body motion

<i>pərana</i>	urinate	Middle: bodily processes
<i>wodana</i>	cry	Middle: bodily processes related to emotions

Synchronically, the element *-VnV-* is not a productive functional element in Tima. In the closely related languages Katla (Hellwig 2013) and Julut (Nuesslein 2020), however, an assumed cognate element is attested as a part of the morphological system. In Katla, *-àná ~ -òńó / -àńá ~ -òńó* is attested as a productive morpheme inducing the notion of habituality with verbs it is attached to.

In Julut, the similar morpheme *-ana ~ -ono* is described as having the following functional scope (Nüsslein 2020: §3.4.2): the morpheme serves to derive inchoative constructions and actualize such aspectual meanings as progressive, iterative, and habitual. Some examples given to illustrate these functions in Julut have corresponding lexemes in Tima. For example, as an instance of the inchoative usage, the verb *guñana* ‘sit down’ is given, which seems to correspond to the Tima *həndana/həndəno* ‘sit’; and *muñana* ‘dry’ in Julut semantically correlates with the Tima *howana* ‘dry’. Functional correspondence, e.g. the iterative function stated for Julut, can be observed with the Tima verb *dəmanaak* ‘swallow (repeatedly)’, which also has a non-iterative form *dəmey-I* (swallow-HT) ‘swallow (once)’; the same is found with the verb *ʔəbənɛ* ‘tread (repeatedly)’ in contrast to *ʔəbɛ-I* (tread-HT) ‘step over (once)’.

Synchronically, some functions covered by the morpheme *-ana ~ -ono* in Julut correspond to a significant extent to the functions covered by the morpheme *-ak ~ -ak* in Tima (dealt with in Chapter 2). The examples adduced to illustrate the habitual function of *-ana ~ -ono* in Julut (also found in Katla) resemble the usage of *-ak ~ -ak* in Tima in its antipassive function, e.g.: *ko-ana* ‘weed’ in Julut and *ampara-ak* ‘weed/clean the field’. Likewise, the progressive function of the Julut suffix is reminiscent of the usage of the suffix *-ak ~ -ak* to indicate an atelic (including progressive, or ongoing) event of a telic counterpart, e.g.: *ahədayu kɔwuh* ‘3P leaped over a stone (once)’ vs. *cehədaak kɔwuh* ‘3P is leaping over a stone.’ It is noteworthy that across Bantu languages, the assumedly cognate suffix *-(a)na-* functions as a reciprocal and antipassive marker (see Dom et al. 2015 and Bostoen et al. 2015).

1.3.4.4 Pluractionality marking and its participation in aspectual distinctions in Tima

Pluractionality is usually defined as the morphological marking on the verb of event plurality.³⁶ Event plurality is understood as the multiplicity of actions denoted by the verb, as well as the duration, or non-completeness, of the event.

Schneider-Blum (2017; see also Alamin 2012: 104 ff.) enumerates the following strategies for expressing the pluractionality of events in Tima:

Table 17. Pluractionality marking in Tima

Strategy	Non-pluractional verb form	English gloss	Pluractional verb form	English gloss
root vowel change (+tonal change)	<i>t̥ih-í</i> pinch-HT	pull it (once)	<i>t̥īh</i>	pull it (several times)
vowel lengthening (+tonal change)	<i>rih-í</i>	turn it (once)	<i>rīih</i>	turn it (several times)
tonal change alone (LH non-plur., HL plur.)	<i>pàŋá</i>	open the mouth (once or for a short time)	<i>páŋà</i>	open the mouth (duration or repeated action)
root reduplication (full or partial) ³⁷	<i>bàrà-y-í</i>	tear once	<i>bàràr-á-àk</i>	tear several times
suppletive verb forms	<i>cóò</i>	stab, pierce (once)	<i>hibi</i>	stab, pierce (several times)
insertion of the formative -t̥- after the root ³⁸	<i>dí-ì</i>	tie it	<i>dí-t̥-àk</i>	tie it repeatedly

³⁶ The term ‘pluractional’ was employed by Newman (1980) to differentiate morphological marking associated with event plurality from inflectional plural agreement.

³⁷ Individual verbs denoting inherently repetitive actions have basic forms that contain reduplicated root units, such as *tétèk* ‘chop’.

³⁸ My own data collected during the fieldwork stays could not confirm that this strategy, i.e. -t̥- insertion, represents a productive strategy for the formation of pluractional verb forms, and I ascribe the individual attested cases where -t̥- occurs in the assumed pluractional construction to idiosyncratic patterns. Some examples explicitly contradict this hypothesis, e.g.: *hìl-t̥-ì-ik* (send-t̥-HT-CAUS) *yápé* ‘send letters **once**’ vs. *hìl-ì-ik* *yápé* (send-HT-CAUS) ‘send letters repeatedly’; *hódòn-t̥-ik* (sit-t̥-CAUS) ‘make **him** sit down’ vs. *hódòn-ik* (sit-CAUS) ‘let **them** sit down’. As Schneider-Blum (2017: 182ff.) points out, the linguistic evidence is indeed quite confusing with regard to -t̥- as a possible pluractionality marker. In the present study, I will not gloss the formative -t̥- at all; it will be represented

In Tima, the most widespread strategy is partial or full root reduplication (see Schneider-Blum 2017; see also Cusic 1981, Lasersohn 1995, and Xrakovskij 1997, who report on the predominance across languages of reduplication as a strategy to express pluractionality of events).

Pluractional verb forms in Tima may be employed in the following cases:

- i) atelic (i.e. unbounded) constructions (durative, iterative);
- ii) the presence of the plural subject and /or object NPs.³⁹

Importantly, there is no way to predict whether a particular verb has a pluractional counterpart; that is, pluractionality in Tima is not an obligatory category and thus manifests a derivational process (see also Schneider-Blum 2017). Likewise, thus far, no regularities can be postulated for every verb as to what factor (i.e. both atelicity and multiplicity of participants or either of them or perhaps some pragmatic considerations) will trigger the usage of the pluractional verb form. In the linguistic analysis below, all attested possible readings with each individual verb will be listed in the translations.

The particular reading (durative or repetitive) of the pluractional verb form in a given construction naturally depends on the lexical aspect of the verb. Generally, the inherently atelic verbs induce a durative reading with pluractional verb forms, whereas with telic verbs, pluractional marking expresses the iterativity of single actions (see Schneider-Blum 2017 for details). The next example pair illustrates the alternation between a non-pluractional (ex. (52)) verb form yielding a telic reading (i.e. the action is bounded) in (52), and the corresponding pluractional verb form in (53), here expressed through partial root reduplication, where the

as being part of the root (which is indeed one of the current hypotheses; see Schneider-Blum (2017: 181, footnote 14) on the case for *-t-* being part of the root).

³⁹ That the number of participants may trigger the alternative marking (i.e. pluractional verb forms cooccurring with a plural subject and/or object) contradicts Schneider-Blum's original claim (Schneider-Blum 2017) that the number of argument NPs plays no role in the choice of verbal marking; only the duration or iterativity of the event are said to be responsible for the employment of the pluractional verb forms. However, the examples provided in this section suggest that the participants' number does influence the marking of the verb. After all, plural participants logically imply a multiplicity (i.e. iterativity) of actions. Another question that deserves further investigation is whether and what pragmatic factors and what contexts (imagined by the speakers) play a role in the construal of events as pluractional or singular, i.e. bounded (even with multiple participants, as testified by the linguistic examples in Schneider-Blum 2017).

action receives an interpretation of an unbounded event (here, both the durative and iterative readings are possible):

- (52) *cíbóónín àm-bàrál-y-ì cìṣṣì*
 SG.girl PERF3-tear-EP-HT SG.cloth
 ‘The girl has torn the cloth (into two parts).’
 (STH20200201 2)

- (53) *cíbóónín céṃ-bàrálà-àk cìṣṣì*
 SG.girl IPFV3-tear:PLUR-AP⁴⁰ SG.cloth
 ‘The girl is tearing the cloth (right now/ in many places)’
 (STH20200201 2)

What examples (52) and (53) also demonstrate is that the transitivity marker (see 1.3.4.3.1 on transitivity marking in Tima) and the pluractional marking of the verb are mutually exclusive: a verb can be either derived for transitivity as in (52) or can be cast in its pluractional form as in (53).

The following example shows that the number of participants may likewise trigger the pluractional form of the verb:

- (54) *ibóónín àm-bàrálà-àk cìṣṣì*
 PL.girl PERF3-tear:PLUR-AP SG.cloth
 ‘The girls have torn a cloth (into two parts/ at several places).’
 (STH20200201 2)

In (54), the subject argument is in the plural and the verb is used in its pluractional form. Another example shows the implementation of the pluractional suppletive verb form *hibì* ‘stab (PLUR)’ with the plural subject; the non-pluractional suppletive form *cóḍ* ‘stab (once)’ is not acceptable with the plural subject, but can be used only with singular participants:

- (55) *ìṣàwúnṣ à-hibì-ìk=à=ṣáṣ*
 PL.hyena PERF3-stab:PLUR-RES=SOURCE=LOC3P
 ‘The hyenas have been stabbed.’

⁴⁰ See 2.4.5 on the correlation of antipassive marking with pluractional (durative) contexts and/or plural participants.

(STH20190131 1)

- (56) *kàḡàwún* *àn-cóò-w-ə̀k=à=ḡáḡ*
SG.hyena PERF3-stab-EP-RES=SOURCE=LOC3P
‘The hyena has been stabbed.’

(STH20190131 1)

The next example pair illustrates the pluractional verb form (here, again, with suppletive forms: *bə̀* ‘put (non-pluractional)’ vs. *hûm* ‘put (pluractional)’) correlating with the plural object:

- (57) *bə̀-ó* *kàḡáwò* *hədər*
put-HT SG.book upright
‘Put the book upright!’

(STH20200203 2)

- (58) *hûm* *yàḡáwò* *hədər*
put:PLUR PL.book upright
‘Put the books upright!’

(STH20200203 2)

The interconnection between the multiplicity of participants and the requirement to use the pluractional verb form (when available) is reflected in the construction of reciprocal events (see 2.3 on reciprocals in Tima): reciprocal verbs that imply at least two participants mutually acting upon each other can be used only with the pluractional verb form (when, of course, a particular verb has a pluractional counterpart). The examples below with the verb *mùn* ‘insult’ in different constructions illustrate this point. The predicate in (59) is construed as non-pluractional, i.e. the subject and object arguments are singular NPs and the verb is marked with the perfect prefix and extended by the transitivity marker *-i*, thus representing a telic form (see 1.3.4.3.1 on transitivity marking in Tima). In (60), by contrast, the construction has a durative reading due to the employment of the imperfective prefix and, consequently, the pluractional root form is used. The sentence in (61) is a reciprocal predicate that likewise requires the pluractional root form:

- (59) *Íbráhím* *à-mùn-i* *Móhàmmàd*
Ibrahim PERF3-insult-HT Mohammad

‘Ibrahim has insulted Mohammad.’

(STH20190131 5)

- (60) *Íbráhím cé-mùùn Móhàmmàd*
Ibrahim IPFV3-insult:PLUR Mohammad
‘Ibrahim is insulting Mohammad (right now/ constantly).’
(STH20190131 5)

- (61) *íwórmàádàh=ná à-/cé-mùùn-àk*
PL.man=DEM.PROX PERF3/IPFV3-insult:PLUR-REC
‘These men have insulted/are insulting each other.’
(STH20200203 5)

Likewise, with suppletive forms, only the form expressing multiple actions can be used in reciprocal constructions. In (62) below, the reciprocal verb has the root *táán* ‘beat (repeated action)’ as its basis. It is not possible to form the reciprocal with the counterpart *hó* ‘hit (once)’, which denotes a single action:

- (62) *ihíná àn-táán-àk*
PRON3PL PERF3-beat-REC
‘They have beaten each other.’
(STH20200203 5)

Interestingly, some (but not all) of the non-pluractional suppletive verb forms that mark a telic counterpart in the alternation are incompatible with imperfective morphology (see 1.3.4.2.2.2). This is the case with the suppletive pair *ò* ‘put’ (telic) vs. *hùm* ‘put’ (atelic, pluractional) mentioned above. The following pair of sentences shows the distribution of these suppletive verb forms:

- (63) *cèm-ò-ó=á=ṭáj=dà kwèéṅ ò=pàṅkà*
PERF1SG-PUT-HT=SOURCE=LOC3P=1SG SG.bowl DIR=shelf
‘I have put the bowl onto the shelf.’
(STH20190113 2)

- (64) *cé-hùm=dà kwèéṅ ò=pàṅkà kùhùnλṅ/ tòttòk*

IPFV1SG-put=1SG SG.bowl DIR=shelf now/repeatedly

‘I am putting the bowl onto the shelf now/ repeatedly.’

(STH20190113 2)

The verb form *b̀̀* can only be used in telic contexts, as in (63), and only with the perfect prefix; the form **cém-b̀̀* (intended IPFV3-put) is unacceptable. Atelic contexts, as in (64), require the suppletive form *h̀̀m*. By contrast, the suppletive pluractional form *táán* ‘beat (repeated action)’ is compatible with imperfective morphology; the form *cén-táán* (IPFV3-beat) ‘3P is beating 3P’ is acceptable.

To conclude, I would like to underline that pluractionality in Tima is intricately connected to the overall system of aspectual distinctions. Aspect in Tima thus has to be regarded as what Sasse (2001) calls a compositional category (or “sentence aspect”; Sasse 2001: 18), whereby the aspectual value results from the intricate interplay of various factors; aside from the lexical aspect, these involve clause-level constituents that express the number and other properties of participants, morphological operators (such as Tima TAM morphemes), etc. As Sasse (2001: 22) notes, “the compositional idea has by now become an integral part of almost all contemporary approaches to aspect ... A central issue in research on aspect composition is the contribution of arguments and their semantic properties to sentence aspect. For example, many non-stative verbs can give rise to either a telic or atelic interpretation according to whether their theme argument is quantized.” Furthermore, Sasse (2001: 69) emphasizes that each individual language will have specific patterns of interactions between the contributing factors that ultimately determine the overall aspectual value. Following Sasse (2001), in the analytical part of this dissertation, I describe the aspectual value of clauses in Tima in terms of boundedness vs. unboundedness as composite categories resulting from the interplay of contributing factors operating on the clausal level. Bounded event types (i.e. those construed as including both the initial and the final endpoints) will be referred to as telic, while unbounded events (which, in Tima, in some constructions, are also determined by the multiplicity of participants) will be referred to as atelic constructions.

This overview closes the description of the structural properties of Tima relevant to the data analysis presented in Chapters 2 and 3. Before we move to the analytical part, the next subsection explains the methodology and the types of data used for the linguistic analysis.

1.4 Materials used in the study

The linguistic analysis presented in the chapters below is based on the large linguistic database compiled as part of the project Documenting Tima Language introduced in section 1.1, as well as all the manifold linguistic contributions produced since the completion of the documentary project. Additional data were collected during my two field trips to Khartoum, comprising a four-week stay in January-February 2019 and another two-week stay in February 2020. Further data were kindly collected for me by Gertrud Schneider-Blum during her research stay in Khartoum in 2022. The verbs and verb forms that serve as the analytical basis for the establishment of semantic verb classes in Tima are all contained in the Appendix of the dissertation.

As a first step in the investigation, the verbs contained in previously collected annotated texts, as well as in the existing research articles, were grouped together according to their common morphosyntactic patterns (in terms of compatibility with particular derivational morphemes).

The aim of the fieldwork sessions was then to close the gaps in the database thus compiled, i.e., the verbs gathered into classes at the first stage were checked for (in)compatibility with the different valency-changing morphemes. Along the way, new lexemes were added to the existing database. Quite fruitful in this regard were the elicitation prompts provided by the stimuli databank of the Max-Planck-Institute (Language and Cognition Field Manuals and Stimulus Materials, available at <http://fieldmanuals.mpi.nl/>). In particular, I worked with the PUT and CUT videos, which enabled me to collect new verbal lexemes and elicit the possible derivational verb forms of these new verbs through the manipulation of the Tima sentences volunteered when describing the video scene, by changing the argument structure, the number of participants, and the temporal characteristics of the predicates.

After the grouping of verbs sharing the same morphosyntactic patterns of behavior (taking the same valency-changing morphemes), a closer look was taken at the possible common semantic components. This second step enabled me to subdivide further the form-based classes into relatively homogeneous semantic classes of verbs.

Even though the aim has been to list every possible derivational verb form, as well as to elicit negative evidence (i.e. the patterns of incompatibility of certain verbs with particular derivational morphemes), the database of almost 400 lexemes compiled unfortunately still contains some gaps (marked as n.a. (not attested) in the Appendix). Overall, the unattested forms have not been relevant for the proposed generalizations.

Another caveat concerning the elicited verb forms should be pointed out, namely concerning the discrepancy between possible verb forms, reflecting the degree of productivity of a given verbal extension, on the one hand, and the verb forms that are actually probable, i.e. a form that regularly occurs in conversations, on the other. That is, the question of how the possible forms map to the patterns of use in real-life communication cannot be answered based on the materials collected for the present analysis. Still, the database of verb forms resulting from the survey of verbal behavior in Tima as presented here provides substantial grounds for further detailed examination of various aspects of the verbal domain in Tima. Likewise, it may be useful for comparative studies on related and unrelated languages, first and foremost, of course, in the domain of valency-changing operations and the compatibility of specific verb meanings with particular derivational categories.

2. The derivational morpheme *-ak/-ak* and its functional distribution through the verbal lexicon

2.1 Introduction

This chapter presents the semantic classification of verbs attested with the derivational suffix *-ak / -ak*, a multifunctional morpheme largely covering various aspects of the middle domain.

The phonological realization of the suffix *-ak / -ak* is subject to the rules of vowel harmony, i.e. the [\pm ATR] feature specification of the vowel depends on the same feature specification of the preceding vowel (see also Schneider-Blum and Dimmendaal 2013: 223; Bashir 2010: ch. 5.2.2.1). For example, in *cém-ból-àk* ‘3P is/are forging’, the vowel of the suffix assimilates to the [-ATR] feature of the root vowel *ból*; in *cé-ríih-àk* ‘3P is/are plaiting’, the [+ATR] value of the suffix is determined by the same value of the preceding verbal stem vowels *ii*.

In the verbal structure, the suffix *-ak / -ak* occupies the second postverbal position in the sequence of derivational elements, following the high transitivity suffix *-i / -i* (see section 1.3.4.1 on the verbal structure in Tima).

Regarding the functional scope of the suffix *-ak / -ak*, the morpheme is involved in the construal of the following meanings: reflexive (ex.(65)); reflexive-possessive (ex. (66)); autobenefactive (ex. (67)); reciprocal (ex. (68)); one-participant middles (ex. (69)); antipassive (ex. (70)). All of these functions are related to valency: in most cases, the suffix signals valency reduction. Reflexive-possessive, autobenefactive and some types of middles are exceptions to this generalization; in these constructions, the underlying transitive structure is not affected (see 2.2.1.2.1, 2.2.1.2.2, and 2.2.2 below). Also, as will be elaborated below, presumably linked to the antipassive function (section 2.4), the suffix can be employed to express the notion of atelicity (ex. (71)) without altering the argument structure of the predicate.

- (65) *píná àŋ-kámà-àk*
PRON3SG PERF3-wash-MID/REFL
‘She washed herself.’ (reflexive)
(03.03.07-2-147.wav)

- (66) *bàrh-àk* *idàwún*
wash-MID/REFL PL.hand
‘Wash your hands!’ (reflexive-possessive)
(15.03.10_03_01.wav)
- (67) *àm-púr-í-y-àk* *yéèh*
PERF3-take-HT-EP-MID/REFL sorghum
‘He took sorghum (for himself).’ (autobenefactive)
(STH20200207 1)
- (68) *ihíná* *àn-táán-àk*
PRON3PL PERF3-beat-MID/REFL
‘They have beaten each other.’ (reciprocal)
(STH20200203 5)
- (69) *àḡ-káár-àk*
PERF3-grow-MID/REFL
‘She has grown (up).’ (one-participant middle)
(STH20190119 1)
- (70) *céḡ-kàrh-àk*
IPFV3-carve-MID/REFL
‘He is carving.’ (antipassive)
(STH20200209 2)
- (71) *cén-dá-àk* *kìminà*
IPFV3-touch-MID/REFL SG.snake
‘He is touching the snake.’ (atelicity marking)
(STH20190128 4)

In order to give a unified analysis of all these functions, it is convenient to group the attested constructions into three “major” functional types: middle-reflexive (glossed as MID/REFL in the representation below, explored in section 2.2), reciprocal (REC; section 2.3), and antipassive

(AP; section 2.4). Here, the characterization “major” does not refer to any empirically established status of these groups. The groups are used for convenience in order to place the current discussion in the theoretical discourse and for ease of argumentation in the analysis pursued below. That is, for the purposes of the current analysis (to elucidate the conceptual-semantic links between all the attested usages), these three meanings are taken to be sufficiently representative even of the “extended” functions. It is thus assumed here that the reflexive-possessive (ex. (66)) and the autobenefactive (ex. (67)) functions represent extended usages of the “core” reflexive function (discussed in section 2.2.1) by virtue of a shared meaning component ‘oneself’ inherent to both construction types.

The one-participant middle constructions (2.2.2) are likewise subsumed within the major middle-reflexive group on a par with the reflexive group (which contains the reflexive proper, the reflexive-possessive, and autobenefactive verbs) based on the conceptual affinity between these functions: both the reflexive and the one-participant middle constructions denote an extralinguistic situation involving a single referential entity; in both states of affairs, there is no transfer of any effect associated with the action towards some other physically distinct entity.

Reciprocals are treated in their own right due to their complex conceptual structure, involving at least two distinct participants that simultaneously bear two semantic roles: the acting and affected entity. Yet, in contrast to reflexive situations, which also exhibit the assignment of dual roles, with reciprocals, the initiating and the affected entities of the same activity do not converge in the same referential entity. The two participants, A and B, are in an inverse relation to each other: A acts on B, and B acts on A (see section 2.3).

The aspectual function (atelicity marking) of the suffix *-ak /-ak* is tentatively treated here as closely linked to the antipassive function (see 2.4.5 below for a detailed elaboration of this hypothesis).

The individual functions ascribed to the middle-reflexive, the reciprocal, and the antipassive groups are dealt with in separate subsections. In the remainder of this introduction, overall structural commonalities shared by the three overarching functions of *-ak /-ak* are considered.

It is convenient to begin with the surface representation of the three construction types since this is what can be directly observed. As noted above, all three major functions represent valency-decreasing operations and thus have transitive predicates as counterparts (excluding the reflexive-possessive function, where the transitive structure is preserved (2.2.1.3), and the largely lexicalized group of one-participant middle verbs (2.2.2)). Consider, for illustration, the

following example pairs, where the first sentence in each pair shows the transitive clause and the second sentence represents the derived predicate: example (72) shows the reflexive derivation, example (73) demonstrates the reciprocal derivation, and the antipassive derivation is exemplified in example (74):

(72) *pínλ àŋ-kámó-òk cíbλ* vs. *pínλ àŋ-kámá-àk*
 PRON3SG PERF3-wash-CAUS child PRON3SG PERF3-wash-MID/REFL
 ‘(S)he has washed the child.’ ‘(S)he has washed her/himself.’
 (03.03.07-2-149.wav) (03.03.07-2-147.wav)

(73) *pínλ àn-táán cíbλ* vs. *ìhínλ àn-táán-àk*
 PRON3SG PERF3-beat beat PRON3PL PERF3-beat-REC
 ‘(S)he has beaten the child.’ ‘They have beaten each other.’
 (STH20200203 5) (STH20200203 5)

(74) *pínλ àŋ-kàrh-í fòndòk* vs. *pínλ céŋ-kàrh-àk*
 PRON3SG PERF3-carve-HT mortar PRON3SG IPFV3-carve-AP
 ‘(S)he has carved a mortar.’ ‘(S)he is carving.’
 (STH20200209 2) (STH20200209 2)

The structural profile of the derivations exemplified above can be schematically represented as follows:

Figure 8. The structural properties of the middle-reflexive, reciprocal, and antipassive operations

Underlying base structure (lexicalizations excluded)	Derivational operation	Resulting construction
A V _{transitive} P →	Middle-reflexive	S _A V _{intransitive}
A V _{transitive} P →	Reciprocal	S _A V _{intransitive}
A V _{transitive} P →	Antipassive	S _A V _{intransitive}

As clearly seen from the schematic representations above, the morphosyntactic mechanism underlying all three derivations and the resulting constructions have identical surface representations: in all three cases, the derivational suffix *-ak* / *-ak* affects the syntax in the same

way: the underlying P argument is eliminated; the A, now the sole core argument (S_A), keeps its initial syntactic position.

Generally, the distinct functions named can be inferred from the hosting construction. The interaction among the various semantic properties contributed by the lexical meaning of the verb, the participants' roles, and the nature of the relations between the predicate and the participants all yield a particular reading of the derived construction. In some cases, a straightforward interpretation is problematic as the boundaries between various functions may not be sharp, but rather continuous. In particular, the delineation of one-participant middle and antipassive constructions causes problems and can be controversial (see 2.2.2 and 2.4 for the criteria applied in this study to delineate these two functions). In the conclusion to chapter 2, I will say a couple of words concerning the functional syncretism exhibited by the Tima suffix *-ak / -ak* in consideration of the diachronic and cross-linguistic perspective.

In the following sections, an attempt is undertaken to subdivide the verbs attested with this morpheme into coherent classes according to shared conceptual-semantic features. The verbs are included in these classes independently of the synchronic status of the suffix, i.e. either as productive derivational morphemes or as lexicalized unanalyzable elements of the verbal stem.⁴¹ The inclusion of lexicalized entries is crucial for the purposes of the present analysis because they provide us with important clues as to the underlying semantics of verbal lexemes occurring with *-ak / -ak*.⁴² Aside from the semantic factor, the lexicalized verbs constitute too large a part of the Tima verbal lexicon to be excluded from the analysis.

The chapter is organized as follows. Section 2.2 introduces the overarching group of middle-reflexive verbs; section 2.2.1 deals with verbs participating in reflexive-type constructions, and 2.2.2 describes one-participant middles. The distribution of *-ak / -ak* in its reciprocal function is dealt with in section 2.3. Section 2.4 is devoted to the antipassive function of the suffix *-ak / -ak*.

⁴¹ Here, I denote verbs containing lexicalized unanalyzable parts as stems rather than roots, since the suffix can still be recognized as an erstwhile productive derivative element.

⁴² As Kemmer (1993: 22) points out, the deponents, i.e. lexicalized verbs, are universal in the middle domain. They constitute too significant a part of verbal lexicons in different languages not to be considered as part of semantic analyses of verbs.

2.2 The middle-reflexive function of the suffix *-ak / -ak*

The present section deals with cases where the usage of the suffix *-ak / -ak* is motivated by the middle semantics of the hosting constructions. The middle is understood here as a cognitive-semantic category covering a cluster of related semantic phenomena that all have in common “the affectedness of an initiating entity” (Kemmer 1993: 130; Lyons 1969; Klaiman 1988). A more general semantic-conceptual definition of the middle as describing actions or states within the sphere of the subject referent (e.g. Benveniste 1971 [1950]: 148; Smyth 1974; Shibatani 2006: 231) also has relevance for the following analysis. The latter definition encompasses event types where there is no transfer of any effect from the action of the A participant. The two factors accentuated in the definitions, i.e. the conceptual status of the subject referent (its affectedness by the action) and the absence of the outward transfer of any effect resulting from the action are considered here to manifest the main defining criteria for deciding whether the usage of the suffix *-ak / -ak* is motivated by middle semantics (rather than constituting an antipassive derivation, for example).

All the constructions described here have in common the type of situation expressed, namely situations where there is a low degree of distinguishability of participants (briefly introduced in 1.2.2.2). The distinguishability of participants can be conceived of in a two-fold way. Firstly, distinguishability is intended to reflect the conceptual distance in terms of the feature specification of participants in the event, i.e. how clearly the Agent is distinct from the Patient (as postulated by the Maximally Distinguished Arguments Hypothesis operationalized by Næss (2007)). When a participant possesses a feature of a contrasting participant type, the conceptual distance between them diminishes; they are less distinguished, for example, when an Agent participant is characterized by the feature [+AFF], i.e. a feature of a prototypical Patient (see 1.2.2.3 above).

The second aspect of the distinguishability of participants, closely related to the one above, pertains to the degree of conceptual separability of acting and acted upon entities. With regard to this second sense, the present analysis largely follows Kemmer (1993) and, with her, Lyons (1969) in conceiving of the middle category as a linguistic construction denoting the self-affectedness (or self-directness) of the event designated by the verb. This definition generalizes over sub-types of self-directed/self-affecting situations such as the reflexive proper (section 2.2.1), i.e. constructions expressing the referential coreference of two distinct participant roles

entailed by the verb on the one hand, and the one-participant middle with its many semantic sub-groups, on the other (section 2.2.2). There is a conceptual difference between these two situation types: whereas reflexive constructions describe events with two distinct participant roles that can refer to distinct physical entities when an underived construction is employed, one-participant middles describe situations where no such conceptual separability of participants is possible – there is only one participant role predetermined by the event structure of the verb (Kemmer 1993). Interestingly, in Tima, we see a linguistic reflection of this conceptual inseparability in that the one-participant middle verbs are to a relatively large extent lexicalized verbs with *-ak / -ak* being an unanalyzable part of the lexical root (i.e. their lexical inseparability mirrors their conceptual inseparability; see 2.2.2 below). Reflexive predicates, in contrast, mostly use the suffix *-ak / -ak* as a productive derivational mechanism (see 2.2.1). That is, reflexive verbs in Tima derive from two-participant base verbs, i.e. verbs that normally express situations where the initiator and the intended (affected) endpoint of the action are physically and/or conceptually distinct entities.

We start with the description of verbs that employ the suffix *-ak / -ak* to indicate the co-reference of two distinct participant roles, i.e. the reflexive proper; after that, verbs denoting one-participant middle events are dealt with.

2.2.1 Verbs acquiring a reflexive reading with the suffix *-ak / -ak*

Reflexive constructions designate situations of co-reference between two arguments of a clause that bear distinct roles. Prototypically, the co-reference between Agent and Patient roles is expressed by means of reflexive constructions. The definition by Faltz (1977: 3), widely referred to in the literature, describes an “archetypical” reflexive situation in terms of the following semantic-syntactic constellation: when a simple clause with two participants, a human Agent or Experiencer on the one hand and a Patient on the other, indicates that these two participants refer to the same entity.⁴³ This type of situation is called a ‘direct reflexive’ by

⁴³ Implicit in this definition is the intra-clausal coreference, thus excluding constructions in which the coreference holds between arguments placed in different clauses of complex propositions. Such is mostly the case with logophoric pronouns that are, *inter alia*, employed in contexts of reported speech and indicate that the subject of the main clause coincides with the subject of the dependent clause. For logophoric marking in Tima see Schneider-Blum (2013).

Kemmer (1993: 43), since the P participant usually has the syntactic function of a direct object. When coreference is predicated of an Agent and a second participant bearing a thematic role other than the Patient, most frequently Recipient or Beneficiary, the corresponding constructions are called indirect reflexives (Kemmer 1993; Kazenin 2001: 918).⁴⁴ Tima utilizes the derivational suffix *-ak* / *-ak* for both situation types, i.e. for direct and indirect reflexive constructions, as exemplified with the following sentences, respectively:

(75) *Háámít àŋ-kámà-àk*
 Hamid PERF3-wash-MID/REFL
 ‘Hamid has washed himself.’ (direct reflexive)
 (STH20200207 2)

(76) *Trúdèl àŋ-kótór-àk kàtáwó*
 Trudel PERF3-take-MID/REFL SG.book
 ‘Trudel has taken the book for herself/with her.’ (indirect reflexive)
 (07.03.10_07_05.wav)

The examples above illustrate what is called the verbal reflexive strategy – the derivation of a reflexive verb by means of a verbal morpheme. As will be shown below, the derivation of direct reflexives by means of the suffix *-ak* / *-ak* has a relatively low degree of productivity in Tima, subject to lexical restrictions on the verb bases (to be explored below in 2.2.1.1). Aside from the verbal strategy, the analytic strategy is also available in Tima; this employs the reflexive nominal *kìdék* or *cídá*, literally meaning ‘neck’ and ‘body’, respectively. The analytic strategy is generally much more permissive in terms of its compatibility with the lexical meaning of the verbs; aside from pragmatic adequacy, there are no particular semantic criteria that would account for a coherent grouping of verbs eligible for periphrastic formation. Section 2.2.1.3 briefly describes the periphrastic strategy in order to more clearly show the borders of the lexical distribution of *-ak* / *-ak* bearing reflexive meaning.

Now we turn to the analysis of the semantic subtypes of verbal reflexive constructions in Tima. The following section (2.2.1.1) is dedicated to the direct reflexive constructions; the indirect

⁴⁴ Haspelmath (forthcoming) suggests the term ‘autopathic’ (from the Greek form *auto-* ‘self, same’ and *path-* ‘patient’) for the ‘direct’ kind of reflexive situation in order to distinguish these constructions from other construction types also labeled reflexives: OBLIQUE reflexives, LOGOPHORIC coreferential constructions, etc.

reflexives, including the reflexive-possessive and autobenefactive constructions, are examined in section 2.2.1.2.

2.2.1.1 The direct reflexives

As defined already, a prototypical reflexive construction has an underlying two-place predicate that entails the semantic roles of Agent and Patient, which are borne by the subject and object arguments, respectively. A reflexively marked verb indicates that the two implied semantic roles correspond to one referential entity, the syntactic reflection of this constellation being an intransitive syntactic structure. The suffix *-ak / -ak* serving as a reflexive marker, thus signals that the subject argument is an instigating and an affected participant simultaneously. The next Tima example sentences illustrate a two-participant predicate (ex. (77)) and a reflexive construction (ex. (78)) derived from it:

(77) *cèŋ-káləm-ə=dà* *kábòh*
 IPFV1SG-bite-EP=1SG SG.meat
 ‘I am biting meat.’
 (STA20200211 1)

(78) *cèŋ-káləm-àk=à=ǎán=dà*
 PERF1SG -bite-MID/REFL=SOURCE=LOC3P=1SG
 ‘I bit myself.’
 (STA20200211 1)

The above example pair illustrates two forms of the two-place predicate *káləm* ‘bite’. In (77), the two obligatory argument positions, corresponding to the two entailed participant roles A and P, are associated with two referentially distinct entities. The Agent role corresponds to the 1st person singular referent and the Patient role to ‘meat’. In (78), by contrast, both roles correspond to a single referential entity – the 1st person singular. The syntactic reflection of this co-reference, signaled by the suffix *-ak*, is that the subject is now the sole core argument, i.e. the derived construction is intransitive. Geniušienė (1987: 33) offers a convenient three-level structural representation to illustrate the semantic and syntactic outcomes of the derivation involving a reflexive morpheme: i) the level of syntactic arguments, ii) the level of semantic

roles, and iii) the extralinguistic referents' level representing actual physical entities. Using Geniušienė's representational schema as a template, we can illustrate the reflexive derivation exemplified in (77) and (78) as follows:

Figure 9. The structure of the reflexive derivation

	Underlying construction			Derived construction	
i	Subject	Direct Object	i	Subject	
ii	Agent	Patient	ii	Agent	Patient
iii	1st part.	2nd part.	iii	Sole part.	

As seen from the schema, the reflexive derivation involves changes at the syntactic level and at the level of referential entities; the thematic role configuration stays intact. Furthermore, the schematic representation shows that the original subject is preserved and that it encodes the original 1st participant (the Agent). Thus, the reflexive derivation in Tima is an agent-preserving operation (it is important to point this out here as this observation should help us to establish the connection to the antipassive function (section 2.4) of the morpheme *-ak / -ak*).

The reflexive function of the suffix *-ak / -ak*, indicating the coreference between A and P, has a low distribution in the verbal lexicon in Tima; only eleven of some 400 verbs analyzed (see the Appendix) allow the formation of direct reflexives by adding the suffix *-ak / -ak*.

The direct reflexives in Tima are attested in two patterns: a) simple or 'light' direct reflexives, so called due to their simple structure consisting of the verb and the suffix (Table 18), and b) compound or 'heavy' direct reflexives (Table 19) that, in addition to the suffix, take the nominal reflexive *kidék / cidá*, which serves as a reflexive intensifier (see below).⁴⁵

⁴⁵ I use here the terms 'heavy' and 'light' reflexive markers following Kemmer (1993: 25, 120) who describes heavy marking as having more phonological substance and light as having less. Yet, due to the peculiar morphosyntactic means employed in reflexive constructions in Tima, there probably is no absolute match with heavy vs. light marking as defined by Kemmer. That is, the sampling of languages used by Kemmer to describe what is meant by 'heavy' vs. 'light' rather seems to point in the direction of intransitive reflexives (that mainly use affixal strategies) as the light form. Heavy reflexives are defined as constructions where an anaphoric noun phrase (e.g. a reflexive pronoun) takes the position of the direct object, preserving the underlying transitive argument structure of the base verb. In the present analysis, the term 'heavy' refers to reflexive constructions where both the suffix and the reflexive nominal specifier are used (having more phonological weight) and the term 'light' is used

Table 18. ‘Light’ direct reflexives (detransitivized constructions expressing coreference between A and P participants)

Verb base	Gloss	Reflexive form PERF3-root-(EP)-MID/REFL	English translation
(k)álòm	bite	àη-kálòm-àk	3P ⁴⁶ has bitten him/herself
ḡhí/ḡh ⁴⁷	pull, undress	àn-ḡhí-y-àk àn-ḡh-àk	3P (SG) undressed 3P (PL) undressed
kòné-	defend, prevent, protect	àη-kòné-y-àk	3P has defended him/herself
kwáár-	dress, wear	àη-kwáár-àk	3P has dressed him/herself
(k)ámà-	wash	àη-kámà-àk	3P has washed him/herself

Table 19. ‘Heavy’ direct reflexives

Verb base (root)	Gloss	Reflexive form PERF3-root-(EP)-MID/REFL	English translation
có	stab, pierce (single action)	àn-có-w-àk <i>cídál / kídék</i>	3P has stabbed him/herself
híbí	stab, pierce (multiple action)	à-híbí-y-àk <i>cídál / kídék</i>	3P has stabbed him/herself (several times)
hò	hit (single action)	à-hò-y-àk <i>cídál / kídék</i>	3P hit him/herself
kòḡòm	cut	àη-kòḡòm-á-ḡ-àk <i>cídál / kídék</i> àη-kòḡòm-àk <i>ídál/ídék</i>	3P (SG) has cut him/herself 3P (PL) have cut themselves

with verbal reflexives without *kídék /cídál*. The transitive reflexive constructions, i.e. those which preserve the original transitive argument structure are called periphrastic (or analytic) constructions here (see below).

⁴⁶ The translation 3P , signifying 3rd person, includes both singular and plural, i.e. the verb form does not change. For reasons of simplicity, I do not include ‘have’ and ‘themselves’ in the translation column. When singular and plural forms are different, both of them are given with the underlying base verb.

⁴⁷ The second verb form designates the pluractional counterpart of the lexeme. In the case of direct reflexive construction, this form is used with a plural subject nominal.

<i>kùbí</i> <i>/kùùb</i>	cover	<i>àη-kùbí-y-àk cídá / kídék</i> <i>àη-kùùb-àk ídá / ídék</i>	3P (SG) has covered him/herself 3P (PL) have covered themselves
<i>ηàηh</i>	scratch	<i>à-ηàηh-àk cídá / kídék</i>	3P has scratched him/herself
Lexicalized form			
<i>πάλλακ</i> (lexicalized)	cut	<i>àm-πάλλακ cídá / kídék</i>	3P has cut him/herself

Aside from the lexicalized verb *πάλλακ* ‘cut’ in Table 19, the transitive counterparts shown in the first columns in the tables above exhibit distinct patterns: while the majority of the verbs have unmarked transitive counterparts, some of the verbs have as their bases precatégorial roots, i.e. verbs without any basic valency, that must be derived before entering a syntactic construction. Their distribution correlates with the construction type in that these precatégorial roots are found in simple direct constructions (three out of five entries in Table 18 are precatégorial roots), while unmarked transitive verbs form composite reflexive constructions (see below on the properties of compound direct reflexives).

The transitive counterparts of the reflexives based on precatégorial roots are encoded in a twofold way. The verbs *(k)ámà-* ‘wash’ and *kwáár-* ‘wear’ employ causative marking *-Vk* (see 3.2.2) when the corresponding constructions express the disjoint reference of A and P participants:

Coreferential A and P participants		Disjoint reference of A and P	
<i>àη-kámà-àk</i>	3P has washed	<i>àη-kámò-òk</i>	3P _i has washed 3P _j
<i>àη-kwáár-àk</i>	3P has dressed	<i>àη-kwáár-èk</i>	3P _i has dressed 3P _j

The next example pair illustrates the intransitive reflexive construction (ex. (79)) and its transitive counterpart derived for causative (ex. (80)):

- (79) *cèη-kwáár-àk=à=íáη=dà*
 PERF1SG-dress-MID/REFL=SOURCE=LOC3P=1SG
 ‘I dressed myself.’

(08.11.07-159.wav)

- (80) *wéèn àη-kwááŋ-ə̀k cíbá*
mother PERF3-dress-CAUS child
'The mother dressed the child.'

(10.11.07_33a.wav)

The verb *kòné-* 'defend, prevent, protect' forms a two-participant predicate with disjoint reference to the participants by means of a bound 3rd person locative pronominal =*ɬáŋ/=yaŋ* (see 1.3.4.2.1 on this morpheme), as shown next:

- (81) *kìcìmbáŋrì àη-kòné=ɬáŋ ὴòŋyáŋ ì=wéèn*
child PERF3-prevent=LOC3P work DIR=mother
'The child has helped the mother with work.'

(STH20190128 4)

Notice also that with the verb *kòné-* there is some degree of semantic discrepancy between the intransitive (i.e. reflexive) and transitive forms: it acquires the reading 'defend, prevent, protect' when derived with *-ak*, and the meaning 'help' when the root is extended with the locative pronominal =*ɬáŋ/=yaŋ*.⁴⁸

With the compound ('heavy') direct reflexives listed in Table 19, the nominal reflexive marker *kìdék* 'neck' or *cídá* 'body' is inserted directly after the verb derived for the reflexive marker *-ak / -ak*, as exemplified next:

- (82) *wórɬ́máádə̀h àn-có-w-àk=à=ɬáŋ kídék*
man PERF3-stab-EP-MID/REFL=SOURCE=LOC3P neck
'The man has stabbed himself.'

(STH20200201 5)

⁴⁸ The verb form *kònéyàk* also has a couple of idiosyncratic readings in particular contexts: *ɬ́máádə̀h àηkònéyàkàɬ́áŋ kíl̀hùnén* 'The husband divorced the woman', and *wéèn àηkònéyàkàɬ́áŋ cíbá àyíhí* 'the mother gave up breastfeeding (lit.: the mother banned/separated the child from the milk)'.

In the sentence in (82), the notion of reflexivity, i.e. the coreference of A and P participant roles, is thus conveyed by the suffix *-ak* in combination with the nominal *kidék*.

Importantly, the reflexive nominal *kidék* / *cidá* does not assume the status of a syntactic argument in compound reflexive constructions: it cannot be moved from its fixed postverbal position, as would be possible, for instance, with the regular direct object that normally follows the verb. Moreover, according to the Tima speakers who provided the example sentences, the reflexive nominal can be omitted without any change of meaning of the proposition (again indicating its non-argument status, since the core arguments are obligatory and cannot be omitted). That is, the sentence in (82) would also be correct without the addition of *kidék*:

- (83) *wórɿsmáádəh* *àn-có-w-àk=à=ɿán*
 man PERF3-stab-EP-MID/REFL =SOURCE=LOC3P
 ‘The man has stabbed himself.’
 (STH20200201 5)

However, the suffix *-ak* is obligatory and cannot be omitted. The following sentence would be an ungrammatical construction to express coreferentiality:

- ? *wórɿsmáádəh* *àn-có=à=ɿán* *kidék*
 SG.man PERF3-stab=source=LOC3P SG.neck
 (not grammatical when describing the coreference between A and P!)

Note, however, that this sentence would be grammatical when describing a situation in which the A participant has stabbed someone else in the neck. In this case, *kidék* would refer to the body part of a second participant, distinct from A (‘The man has stabbed the neck (of some other person).’), i.e. with this usage of *kidék*, no reflexive meaning is encoded.

Taking into consideration the peculiarities of usage of the nominals *kidék* or *cidá* with the direct reflexive constructions, it seems reasonable to assume that in these constructions, the reflexive nominals have what can be called an emphatic or intensifying function, akin to the English *-self* in, for example, ‘I did it myself’. The question of the optionality of the nominal elements *kidék* or *cidá* in direct reflexives deserves a more in-depth investigation. As for now, from the perspective of a non-native speaker, the question cannot be answered with certainty as to whether any meaning difference obtains between the augmented and (optionally) non-augmented variants. The native speakers who provided the examples, although accepting the

variants without the reflexive nominals, still expressed a preference for the augmented construction, i.e. with *kìdék* or *cídá*, saying that “it sounds better”.

The inevitable question arises as to the motivation for the usage of *kìdék* / *cídá* in the direct reflexive constructions presented in Table 19, as opposed to the simple direct reflexives where the adding of *kìdék* / *cídá* is unacceptable (Table 18). The most obvious difference lies in the nature of the extralinguistic situations described by both construction types. Here, the differentiation between what Haiman (1983) calls introverted and extroverted actions seems to be a useful explanatory device. Haiman (1983: 803) points out that the more economic expressions of reflexivity are more characteristic of what he calls introverted actions, i.e. actions “which one generally performs upon one’s self” and that include such verbs as, for example, ‘wash (oneself)’. Haiman (1983) attributes the economic marking of reflexivity of introverted verbs to the principle of predictability, according to which the more expectable or predictable the situation is, the less expressive material is required to transmit such content. ‘Extroverted’ verbs, in contrast, describe those actions that are normally directed towards others; Haiman’s example of this type is the verb ‘kick’ (1983: 803). That is, a reflexive (i.e. self-directed) construction with extroverted verbs presents an unusual or unexpected situation that requires more linguistic information to make explicit that, this time, the action is performed on oneself and not, as expected, on some other entity. The distribution of the verbs in the two tables above seems to largely correspond to the division into introverted and extroverted verbs. Thus, such actions as stabbing, cutting, hitting, and covering (the verbs occurring with *kìdék* / *cídá*, i.e. having more expressive material, Table 19) are more commonly directed towards some participant other than oneself. Thus, it is usually an unfortunate accident when I cut myself, for example. It does not ordinarily happen all the time or, in any case, it happens less ordinarily than when the two participants are two different referential entities. By contrast, such actions as dressing, washing, etc. (these are the verbal reflexives in Tima without *kìdék* / *cídá* (Table 18)) are most naturally performed on oneself, i.e. they represent typical self-directed actions. When we follow this line of reasoning, the analysis of the emphatic usage of reflexive “intensifiers” proposed by Kemmer (1995) could be applied to the distribution of simple and compound direct reflexives in Tima as well. According to Kemmer (1995: 57), intensifiers can be employed in situations where the referent “is to some degree unexpected in the discourse role or clausal role where it occurs”.⁴⁹

⁴⁹ The major focus of Kemmer’s (1995) analysis is the emphatic function of the reflexive intensifier *self* in English as a discourse-pragmatic disambiguator.

It must be noted that individual verbs in both groups defy these generalizations of their introverted/extroverted nature. The verb (*k*)*áləm* ‘bite’ obviously does not correspond to what is described here as naturally self-directed actions, and yet, on formal grounds, it belongs to the self-directed group as defined here, i.e. a reflexive predication with this verb is encoded by more economical means, without the intensifier *kìdék / cidá*. On the other hand, the verb *ḡàḡh* ‘scratch’ describes an action typically performed on oneself (i.e. in Tima, the verb *ḡàḡh* is attested only in contexts of scratching body (parts)); and yet it belongs to the compound group, which has been defined above as an untypical reflexive situation type requiring additional marking (*kìdék / cidá*). For the lack of a better explanation at the moment, we will regard these two instances as representing idiosyncratic cases.

To give a fuller picture of the direct reflexive derivation in Tima, the next table compares the derived direct reflexives, both simple and compound, with corresponding transitive constructions where A and P are not coreferential:

Table 20. Direct reflexives and their transitive counterparts

Coreferential A and P		Disjoint reference of A and P	
Simple direct reflexives			
Reflexive verb (PERF3-root-(EP)- MID/REFL)	English gloss	Transitive verb	English gloss
<i>àḡ-kámà-àk</i>	3P washed	<i>àḡ-kámò-òk (pínà)</i> PERF3-wash-CAUS	3P _i washed 3P _j
<i>àḡ-káləm-àk</i>	3P bit him/herself	<i>àḡ-káləm (pínà)</i> PERF3-bite	3P _i bit 3P _j
<i>àḡ-kòné-y-àk</i>	3P defended him/herself	<i>àḡ-kòné-ṡáḡ (pínà)</i> PERF3-prevent/help =LOC3P	3P _i helped 3P _j
<i>àḡ-kwááḡ-àk</i>	3P dressed	<i>àḡ-kwááḡ-òk (pínà)</i> PERF3-wear-CAUS	3P _i dressed 3P _j
<i>àn-ṡíhí-y-àk</i>	3P (SG) undressed	<i>àn-ṡíhí (pínà)</i> PERF3-pull	3P _i pulled 3P _j
<i>àn-ṡùh-àk</i>	3P (PL) undressed	<i>àn-ṡùh (pínà/ihínà)</i> PERF3-pull:PLUR	3P (PL) _i pulled 3P (SG/PL) _j

Compound direct reflexives			
PERF3-root-(EP)- MID/REFL			
<i>àn-có-w-àk=à=ṭáṅ</i> <i>kídèk</i>	He stabbed himself	<i>àn-có-ṵ-w=à=ṭáṅ</i> (<i>pínλ</i>) PERF3-stab-HT- EP=SOURCE=LOC3P	3P _i stabbed 3P _j
<i>à-híbì-y-àk=à=ṭáṅ</i> <i>ídèk</i>	They stabbed themselves	<i>à-híbì=à=ṭáṅ</i> (<i>pínλ</i>) PERF3- stab:PLUR=SOURCE=LOC3P	3P _i PL stabbed 3P _j
<i>à-hó-w-à kídèk</i>	He hit himself	<i>à-hó-ṵ</i> (<i>pínλ</i>) PERF3-hit-HT	3P _i hit 3P _j
<i>àṅ-kṵṛṵm-à kídèk</i>	He cut himself	<i>àṅ-kṵṛṵm-á=á=ṭáṅ</i> (<i>pínλ</i>) PERF3-cut- HT=SOURCE=LOC3P	3P _i cut 3P _j
<i>àṅ-kúbì-y-àk kídèk</i> <i>àṅ-kúùb-àk</i>	He covered himself They covered themselves	<i>àṅ-kúbì-I</i> (<i>pínλ</i>) PERF3-cover-HT <i>àṅ-kúùb</i> (<i>pínλ/ihínλ</i>) PERF-3cover:PLUR	3P _i covered3P 3P (PL) _i covered 3P (SG/PL) _j
<i>à-ṅàṅh-àk kídèk</i>	3P has scratched him/herself	<i>àṅ-ṅàṅh</i> (<i>pínλ</i>) PERF3-scratch	3P _i scratched 3P _j
<i>àm-pṵṭṵk=à=ṭáṅ kídèk</i>	3P has cut him/herself	Not attested	

From the representation above, it is noticeable that most verbs in the compound group (except *ṅàṅh* ‘scratch’ and the lexicalized *pṵṭṵk* ‘cut oneself’) employ the high transitivity marker (glossed as ‘HT’) *-i / -I* (or the morpho-phonologically conditioned allophones *-o / -ṵ* (see 1.3.4.3.1 on transitivity marking) to form transitive constructions with the corresponding verbs (excluding the pluractional form *kúùb* ‘cover’). This contrasts with the simple direct group, where no transitivity marker is used to form the transitive counterparts and where other morphosyntactic means are employed to form a transitive structure (either the causative marker, the locative pronominal, or no marker at all, as with the verb *ṭíhí/ṭúh* ‘pull’).

The question we could ask is whether this morphosyntactic behavior correlates with the ‘extroverted’ semantics of the base verbs. That is, since the ‘extroverted’ verbs imply in their conceptual structure some other distinct participant towards which the action is directed, these verbs naturally exhibit a higher degree of transitivity (see 1.2.2.2 on the semantic notion of

group comprises the so-called reflexive-possessive, or partitive constructions (2.2.1.2.1), in which the suffix *-ak* / *-ak* expresses the possessive relationship between A and P and where the latter refers to the (inalienably) possessed body part (see below). Actually, the thematic roles Recipient and Beneficiary include possession in their conceptual structure as a semantic subcomponent; they designate participants acquiring the state of possession as a result of an action described by the verb (physical possession in the case of Recipient and possession in a metaphorical sense in the case of Beneficiary). It is thus not surprising that, due to this semantic affinity, the same morphosyntactic encoding is employed to describe the situations of coreference between A and Recipient/Beneficiary, on the one hand, and between A and the (inalienable) Possessor, on the other, as is the case in Tima.

Not so numerous, as compared to the reflexive-possessive indirect reflexives, and seemingly unproductive is the autobenefactive group comprising constructions where coreference holds between the A and Beneficiary semantic roles (2.2.1.2.2).

Common to all verbs in the indirect group is the three-participant event structure, i.e. the situation type associated with indirect reflexives presupposes three arguments: an Agent, a Patient-like participant (Theme or Possessee), and a Recipient/Beneficiary or Possessor, that are syntactically encoded as subject, direct object, and indirect object, respectively. Due to the coreference relationship between the Agent and the participant corresponding to the indirect argument position, the surface constructions are in most cases transitive, as the direct object referring to the non-coreferential P retains its syntactic status (that of a direct object). In the following subsections, these two subtypes of indirect reflexives are dealt with in more detail.

2.2.1.2.1 Reflexive-possessive constructions with *-ak* / *-ak*

The reflexive-possessive subgroup includes constructions in which the derivational suffix *-ak* / *-ak* expresses a possessive relationship between the agentive participant (A) and the acted-upon body (part) (P). Geniušienė (1987) uses the term ‘partitive object’ reflexives to describe this specific kind of relationship holding between the A participant and the P participant, referring to an inalienably possessed entity of A: a body part (hence partitive), or clothes worn on the body, i.e. a quasi inalienably possessed entity. Here, the widely used term ‘reflexive-possessive’ (e.g. Kulikov 2013; Nedjalkov 2007) is employed to describe this situation type.

The next example pair illustrates the indirect reflexive-possessive construction (85) and the corresponding predicate with no possessive relationship holding between the participants (86):

(85) *bárh-àk* *ìdàwún*
 wash-MID/REFL PL.hand
 ‘Wash your hands!’
 (15.03.10_03_01.wav)

(86) *wéèn=lì* *bárh=a=taǵ* *ìdàwùn* *à=y-ìbà*
 mother=FOC.SG wash=SOURCE=LOC3P PL.hand SOURCE=EP-PL.child
 ‘The mother washes the hands of the children.’
 (Dimmendaal and Schneider-Blum, in prep.)

The marker *-àk* in the example sentence in (85) indicates that the body part acted upon is possessed by the A participant. Thus, the implication of the construction in (85) is that the referent of the direct object is Possessee in relation to the referent of the 2nd person singular subject. The corresponding expression without such a coreferential possessive relationship (ex. (86)), i.e. when the body part belongs to a participant other than A, requires explicit mentioning of this other participant. The proclitic *a=* in (86), expressing the Source basic meaning, indicates the Possessor role in this particular case (the child’s hands). Syntactically, the derived construction in (85) is transitive since the P participant in the direct object position is retained, preserving the original transitive structure. That is, the suffix *-àk* has no intransitivizing effect (as is the case with direct reflexives) when used in reflexive-possessive constructions.

Reflexive-possessive constructions with the derivational suffix *-àk* / *-ak* fall into two types according to the accommodating structure of the derived construction: bivalent (Table 21) and trivalent constructions (Table 23). Example (85) above is a manifestation of a bivalent reflexive-possessive construction. In tri-valent reflexive-possessive constructions, the body part argument occupies the indirect object position and bears the semantic notion of location; the referent of the direct object represents a theme-like participant in such cases, usually a piece of clothing that is put on or some other item applied to a body part, e.g. a flower in the hair (see below).

In Table 21, the attested bivalent reflexive-possessive constructions are presented.

Table 21. Bi-valent possessive-reflexive constructions

Base verb	Gloss	Reflexive-possessive construction (TAM3-root-(EP)-MID/REFL)	English translation
Body care verbs			
<i>bárh</i>	wash	<i>àm-bárh-àk idl̀ẁùn</i>	3P has washed his/her hands
<i>círèèr</i>	brush (teeth)	<i>àn-círèèr-àk iléy</i>	3P has brushed his/her teeth
<i>cìnìní</i>	rub	<i>cén-cìnìní-y-àk ù</i>	3P is rubbing his/her eyes
<i>dí</i>	tie	<i>àn-dí-àk káàm</i>	3P has tied his/her hair
<i>(k)álò̀m</i>	bite	<i>à̀η-kálò̀m-àk=à=̀tá̀η kíl̀l̀ỳì</i>	3P has bitten his/her tongue
<i>kò̀rò̀m</i>	cut	<i>à̀η-kò̀rò̀m-àk=à=̀tá̀η káàm</i>	3P has cut his/her hair
<i>̀t̀hí/̀t̀h</i>	pull	<i>àn-̀t̀hí-y-àk cíléy</i>	3P has pulled out his/her tooth
		<i>cén-̀t̀h-àk cíléy</i>	3P is pulling out his/her tooth
(Un)dressing verbs			
<i>cí</i>	go (- <i>cíyàk</i> is a possible lexicalized form)	<i>àn-cí-y-àk cíí</i>	3P has put a piece of cloth (onto himself)
<i>kwáár-</i>	dress, wear	<i>cé̀η-kwáár-àk cíí</i>	3P is wearing a piece of cloth / dresses him/herself
<i>̀t̀hí/̀t̀h</i>	pull	<i>àn-̀t̀hí-y-àk cíí</i>	3P has pulled off a piece of cloth
		<i>àn-̀t̀h-àk ìí</i>	3P has pulled off clothes

The verbs in the table are subdivided according to two common situations: a) body-care or grooming actions, and b) (un)dressing actions. Note that the same base verb can be used in either of the two situations, i.e. the verb *̀t̀hí / ̀t̀h* ‘pull’: pull out one’s tooth, or pull off one’s clothes. However, the verb *̀t̀hí / ̀t̀h* is rather exceptional anyway. Recall from the list of the direct reflexives (Table 20) that it is also acceptable to use the derived form with *̀t̀hí* ‘pull’ without the P argument, *̀t̀híyàk*; though in that case, the resulting construction allows just the interpretation ‘to undress (intrans.)’. The same is true with *kwáár-* ‘dress, wear’: it can be used in objectless constructions meaning ‘dress oneself’ (yielding a direct reflexive construction) or with a direct object referring to an item of clothing yielding the meaning ‘put on / wear a piece of cloth’ (yielding an indirect reflexive construction).

The base verbs are two-place verbs entailing an animate (mostly human) A participant and, as a rule, an inanimate P participant. The derived reflexive-possessive constructions correspond to the three-participant situation type where A is the participant instigating the action, P is the body part or a piece of clothing, and the indirect participant is the possessor of the P participant. Consider the following contrastive examples:

- (87) *kàcimbàrì* *àn-círèèr-àk* *ilèy*
 SG.child PERF3-brush-MID/REFL PL.tooth
 ‘The child has brushed his/her teeth.’
 (STH20200203 5)
- (88) *wéèn* *àn-círèèr-à=à=ḡàḡ* *ilèy* *à=cíbá*
 SG.mother PERF3-brush-HT=SOURCE=LOC3P PL.tooth SOURCE=child
 ‘The mother has brushed the child’s teeth.’
 (STH20200203 5)

The argument structure in (87) comprises the subject corresponding to A (*kàcimbàrì* ‘child’) and the direct object corresponding to the acted upon body part (*ilèy* ‘teeth’). The suffix *-ak* indicates that the child is brushing her/his own teeth, i.e. it conveys a possessive relationship. In none of the attested cases do other linguistic elements, such as possessive pronouns, for example, occur in these constructions, indicating that *-ak* / *-ak* suffices to express the possessive meaning with constructions involving body parts.⁵⁰ The corresponding non-possessive clause in (88), i.e. when there is no possessor-possessee relationship between A and P, overtly expresses the possessor NP making the overall construction bulkier (or “heavier”) than the reflexive-possessive counterpart. We can again appeal to the principle of economy (Haiman 1983), according to which the more common (or expected) state of affairs does not need to be very explicit in terms of linguistic expression; the result is a more compact structure compared to a less common (less predictable) situation. As we said above in section 2.2.1.1, with body care and (un)dressing verbs, the most natural and frequent⁵¹ case is when the initiator and the

⁵⁰ However, no contrastive/emphatic examples have been elicited, such as ‘He brushed HIS teeth, not HERS’. Generally, languages utilize more linguistic material in contrastive propositions of this sort in order to conform to the principle of clarity.

⁵¹ Haspelmath (2021) supplements Haiman’s (1983) predictability/naturalness condition, associated with economical coding, with the usage-based frequency condition: it is the general frequency of use of reduced

endpoint (the referent acted upon) are one and the same referent, hence the appropriateness of economical marking.⁵²

Using Geniušienė's (1987) schematic template, where level (i) refers to the syntactic arguments, level (ii) shows the participants' roles, and (iii) the actual referents, we can represent the possessive-reflexive derivation expressed in bi-valent syntactic structures as follows:

Figure 10. The structure of the reflexive-possessive derivation

Underlying construction				Derived construction		
i	Subject	Indirect object	Direct object	Subject		Direct object
ii	A	Possessor	P/Theme Possessee	A	Possessor	P/Theme Possessee
iii	1 st part.	2 nd part.	body part/clothing	1 st part.		body part/clothing

From the schema, it can be seen that in the derived construction, the subject argument corresponding to the 1st participant referent assumes two semantic roles – A and the Possessor resulting in a reduced syntactic representation compared to the construction where no co-reference is implied.

Overall, the verb bases that allow the reflexive-possessive constructions denote manipulative actions carried out by an agentive participant on an inanimate second participant (Patient/Theme), which is inalienably or quasi-inalienably possessed by the Agent. It appears highly probable that any verb exhibiting this feature specification may serve as a basis for the reflexive-possessive derivation as long as the resulting meaning is pragmatically acceptable. That is, there is no direct counter-evidence to the potentially high productivity of the reflexive-possessive derivation.

linguistic structures expressing particular external situations, not the facts of the natural world per se, that lead to their conventionalization within a speech community.

⁵² In some languages, grooming verbs in constructions containing the body part as a participant argument lack any marking indicating the reflexive-possessive relationship entirely, due to its high degree of predictability with this semantic group of verbs. For example, in Russian, the expression *On mojet ruki* (3SG.M wash.3SG hand.PL) 'He washes hands' lacks any marking of possession or coreferentiality. The addition of a possessive reflexive pronoun *svoji* 'his' is only acceptable in a contrastive/emphatic context.

Importantly, the semantic structure of the base verbs is typical of the antipassive derivation as well (see section 2.4): one of the defining properties of the antipassive is, for example, an agentive participant in the subject syntactic position. The manipulative activity (presupposing a patientive target participant to be acted upon) inherent in the base verbs in reflexive-possessive constructions is also characteristic of the antipassive derivation. As a matter of fact, some of the derived verbs in Table 21 have an antipassive reading in objectless constructions, e.g.:

Table 22. Reflexive-possessive and antipassive constructions based on the same verb roots

Reflexive-possessive		Antipassive	
Tima construction (TAM3-root-MID/REFL)	English gloss	Tima construction (TAM3-root-AP)	English gloss
<i>àm-bárh-àk idáwùn</i>	3P has washed his/her hands	<i>àm-bárh-àk</i>	3P has washed (clothes)
<i>àḡ-kàḡòm-àk káàm</i>	3P has cut his/her hair	<i>àḡ-kàḡòm-àk</i>	3P has harvested
<i>àḡ-kálòm-àk=à=ṭáḡ kílàḡii</i>	3P has bitten his/her tongue	<i>céḡ-kálòm-àk⁵³</i>	3P bites (e.g. of a dog)

A subset of verbs derived with *-àk / -ak* form three-participant predicates with a reflexive-possessive relationship holding between participants. The participants here are Agent encoded as subject, Patient/Theme encoded as direct object, and Goal/Location (body part) expressed as indirect object. The corresponding situation type can be schematically described as ‘putting (or handling) an item on one’s body(part)’, as illustrated by the following example:

- (89) *cibóònìn cé-hùm-àk kèdòlè yáàh*
 SG.girl IPFV3-put-MID/REFL SG.flower LOC:head
 ‘The girl puts a flower into her hair (lit. head).’
 (STA20200208 4)

A corresponding construction without a possessive relationship between A and the participant in the direct object position, i.e. non-derived for *-àk / -ak*, has an extended surface structure in which the possessor (non-coreferential with A) of the body part acted upon must be overtly

⁵³ As Aboh commented (STA20200211 1), *céḡ-kálòm-ak* ‘I am biting’ can be said when explaining to someone the meaning of the word ‘to bite’ and simultaneously showing the action designated: ‘Look, I am biting.’

expressed. In (90) below, this participant is expressed through an oblique noun phrase marked with the directive morpheme *i=*:

- (90) *kàhúnè* *cé-hùm=yáj* *ídàlé* *i=cíboónìn yáàh*
 SG.woman IPFV3-put=LOC3P PL.flower DIR=SG.girl LOC:head
 ‘The woman is putting flowers into the girl’s hair.’
 (STA20200208 4)

Schematically, the tri-valent reflexive-possessive constructions may be represented as follows:

Figure 11. The structure of tri-valent reflexive-possessive constructions

Underlying construction					Derived construction			
i	Subject	Direct object	Indirect object	Location/ Goal	Subject		Direct object	Location/ Goal
ii	A	P/Theme	Possessor	Possessee	A	Possessor	P/Theme	Possessee
iii	1 st part.	2 nd part.	3 rd part.	body part/ clothing	1 st part.		2 nd part.	body part/clothing

Here, again, a reduced syntactic representation can be observed in the case of the derived construction compared to the underlying frame, due to the coreference between A and Possessor conveyed by the suffix *-ak / -ak*.

Overall, the subgroup of trivalent reflexive-possessive verbs represents a compact homogeneous semantic group expressing actions of putting or holding/carrying something on one’s body (part). The bases can be both bi- and trivalent verbs. Yet the derived constructions are necessarily trivalent, comprising three obligatory participants in accordance with the nature of the designated event: a body part (inalienable possessee) of the A participant (possessor) and a Theme participant in the direct object argument position. The suffix has no intransitivizing effect here, either; it only serves as the marker of the possessive relationship between A and the referent of the indirect object – the possessed body part. Semantically, the suffix *-ak / -ak* adds the meaning component ‘oneself’.

The table below shows the attested cases of trivalent reflexive-possessive constructions.

Table 23. Trivalent reflexive-possessive constructions

Base verb	English gloss	Reflexive-possessive construction (TAM3-root-(EP/HT)-MID/REFL)	English gloss
<i>bó</i>	put (telic)	<i>àm-bó-y-àk kidòlò yáàh</i>	3P has put a flower into her hair (lit. onto his/her head)
<i>hùm</i>	put (atelic)	<i>cé-hùm-àk idòlò yáàh</i>	3P is putting flowers into her hair (lit. onto his/her head)
<i>dí</i>	tie	<i>àn-dí-àk yàntóhé yádìì</i>	3P has tied a rattle to his/her leg
<i>ηλνì</i>	carry/ take	<i>àη-ηλνì-y-àk kárbáánà wòrámpàη</i> (telic)	3P has put the baby on his/her hip
		<i>céη-ηλνì-àk kárbáánà wòrámpàη</i> (atelic)	3P is carrying the baby on his/her hip
<i>pèr</i>	lean/lay down	<i>àm-pèr-àk gálsmí yàmlàmiì</i> (telic)	3P holds a pen horizontally on his nose
		<i>àm-pèr-àk íbá yìwúlùη</i> (atelic)	3P has laid the children on his/her lap
<i>ῥῶ</i>	take (pluractional)	<i>àn-ῥῶ-y-àk yáàh</i>	3P (PL) took it onto their heads

Note that in all cases, the indirect object referring to the body part argument is a locative noun marked with the initial *w-/y-*, typical of locative expressions involving body parts (see Dimmendaal 2014 for details). Therefore, no additional marking is necessary to indicate its syntactic status as an indirect object, although this normally requires a directive proclitic *ɪ= / ɪ=* to signify the Goal thematic role. Compare the derived construction with a body part participant in the indirect object syntactic function in (91) and the corresponding underived construction in (92) for an illustration of this point:

2.2.1.2.2 Autobenefactive constructions with *-ak / -ak*

The transitive structure of verbs marked with *-ak / -ak* is also observed with a tight subgroup of verbs bearing a generalized meaning ‘acquire (for oneself)’. These verbs can be termed ‘reflexive-benefactive’, or ‘autobenefactive’, since here the A-referent conflates the thematic roles of Agent and Beneficiary: A takes/acquires for him/herself (Beneficiary). The suffix *-ak / -ak* has no intransitivizing effect here either (as with the reflexive-possessive verbs); it just adds the meaning component ‘for/with oneself’. Consequently, the underlying transitive structure with an obligatory direct object argument is preserved in autobenefactive constructions. The next pair of sentences demonstrate the derived autobenefactive construction (ex. (94)) and the corresponding non-coreferential predicate (ex. (93)):

- (93) *kòhòmbìlí àm-pòrr yàntówán ìddíl kùlá*
 SG.donkey PERF3-take:PLUR PL.thing PL.heavy yesterday
 ‘The donkey carried heavy things yesterday.’
 (STH20200203 2)

- (94) *ám-pór-í-y-àk=à=íáŋ yéèh à=tùŋkwííŋ*
 PERF3-take-HT-EP-MID/REFL=SOURCE=LOC3P sorghum SOURCE=pot
 ‘(S)he took sorghum for her/himself from the pot.’
 (STH20200207 1)

In both cases, the predicate has a transitive argument structure with an unmarked direct object directly following the verb. The comparison of the two sentences also illustrates quite clearly the autobenefactive notion of the construction with *-ak / -ak*: obviously, the donkey does not carry the heavy things for its own benefit, and, likewise, there is no possessive relationship implied in the unmarked construction in (93). That is, the unmarked verb conveys the meaning ‘carry/hold’. The suffix *-ak* in (94) adds the autobenefactive notion ‘for oneself/one’s benefit’ to the derived construction.

The feature specification [+human] is not necessarily accorded a crucial role in autobenefactive constructions, since it is also possible to say:

- (95) *àη-kòdìy-àk=à=ṭáj* *†ḣ=kàrcàηkál*
 PERF3-take:EP-MID/REFL=SOURCE=LOC3P ERG=possession
 ‘he/she is possessed / they are possessed’ (lit. The possession has taken them
 (for itself); [NV])
 (Dimmendaal and Schneider-Blum, in prep.)

What is essential in (95) is the element of a possessive relationship (‘take hold of something’ with the resulting state of possession) holding between A and the referent of the direct object. Also, in such cases as demonstrated in (95), we are obviously dealing with metaphorical extension; it is usually possible for natural force phenomena that have an inner energy to effect changed states in the environment and to thus be perceived as animate beings. The next table shows the attested autobenefactive verbs:

Table 24. *Autobenefactive constructions with -ak / -ak*

Verb base	gloss	Autobenefactive construction (TAM3-root-(EP/HT)-MID/REFL)	English translation
<i>kòdí</i>	take, accept	<i>àη-kòdí-y-àk</i>	3P has taken it with /for him/herself
<i>póri</i>	take	<i>àm-póri-y-àk</i>	3P has taken it with /for him/herself
<i>kəpà-</i>	catch	<i>àη-kəpà-y-àk</i> (telic) <i>àη-kəpà-àk</i> (atelic)	3P has caught it 3P (PL) have caught it (SG/PL)
<i>kòtí</i>	take	<i>àη-kòtìr-àk</i> ⁵⁴	3P has taken it with /for him/herself

⁵⁴ The form *àηkòtìràk* invites two possible explanations. Since no corresponding underived form *kòtìr* is attested anywhere in the database, and *-Vr* does not belong to the inventory of meaning-building elements in Tima either, *kòtìràk* might just be a frozen unanalyzable form with the meaning ‘seize/ take hold of’. Alternatively, it is just a regular derivation from the corresponding verb *kòtí* ‘to take’ with an irregular intervocalic epenthetic element *-r-* (*-y-* and *-w-* are the typical epenthetic glides in Tima). One further possibility would be a historical loss of the final *r* of the verb **kòtùr*.

(or lexicalized <i>kòtòr̀àk</i>)			
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One verb can be said to be halfway lexicalized: synchronically, there is no non-derived form of the verb *kəpa* ‘to catch’; the suffix *-ak* is obligatory. However, two different morphological forms of the verb exist that are used in telic vs. atelic constructions. The form *àŋ-kəpà-y-àk* (PERF3-catch/hold-HT-MID/REFL) yields a telic reading (a single action); with multiple or iterative/durative actions, the atelic form *àŋ-kəpà-àk* (PERF3-catch/hold-MID/REFL) must be used.

The autobenefactive function of the suffix *-ak / -ak* (designating coreference between A and Beneficiary roles) is limited to a small group of verbs meaning ‘take, acquire, take hold of’ recorded so far. The productive mechanism for expressing the autobenefactive proposition ‘do sthg. for oneself’ is by means of the reflexive nominal *kidék* ‘neck’ (meaning ‘self’ in reflexive-like constructions) marked with the prefix *ii- / ii-* to signal the Beneficiary role:

- (96) *cibóònìn* *àŋ-kə̀r̀əm* *ítúk* *íi=kidék*
 SG.girl PERF3-cut PL.bread DAT=neck
 ‘The girl has cut pieces of bread for herself.’
 (STH20200203 5)

In the example above, the periphrastic construction is employed to express the relationship of coreference between the Agent and Beneficiary participant roles, whereby the ‘flagged’ reflexive nominal is anaphorically bound to the A participant. The periphrastic constructions are briefly discussed in the next section.

Autobenefactive verbs marked with *-ak / -ak* represent ‘light’ coding (as opposed to the ‘heavier’ analytic construction exemplified in (96)) of the Agent-Beneficiary coreferentiality. The more economical way of indicating that the agent and the entity benefitting from the action with verbs meaning ‘acquire’ is again accountable for in terms of the principle of predictability, making the explicit (‘heavy’) expression superfluous with these verbs. That is, implicit to the lexical meaning of verbs like ‘take’, ‘acquire’, ‘get hold of’ is that the acting participant who initiates the action is also at the receiving end of that same action. This conceptualization elucidates the underlying middle semantics of the autobenefactive verbs: the defining property of the middle is the coincidence of the initiator and the endpoint (see Kemmer (1993: 78) for cross-linguistic

examples of the middle marking of the verbs that denote such senses as ‘acquire’, ‘attain’, ‘receive’, etc.). Thus, the conceptual frame of the autobenefactive event may account for the usage of the suffix *-ak / -ak* with the verbs presented in this section. Note also that, similarly to the reflexive-possessive constructions (2.2.1.2.1), the subject argument is characterized by the feature specification [+VOL, +INST, +AFF]. That is, the A participant of autobenefactive predicates is acting volitionally (recall the note on metaphorical extensions with natural force phenomena) in order to attain an object and it is also the endpoint of the action.

2.2.1.3 An alternative strategy (to *-ak / -ak*) for expressing the coreference of participants

The present section aims to better delineate the distribution of the reflexive function of the derivative suffix *-ak / -ak* across the Tima verb lexicon. For this purpose, it seems meaningful to show where the functional domain of the morpheme has its boundaries, beyond which another strategy has to be employed to express situations of coreferentiality.

First, for convenience of reading, all the attested reflexive verbs derived for *-ak / -ak* (including the reflexive-possessive and autobenefactive verbs) discussed above are listed in Table 25:

Table 25. *Derived reflexive verbs (overview)*

Direct reflexive constructions	
<i>àhkámààk</i>	3P has washed him/herself
<i>àhkálòmàk</i>	3P has bitten him/herself
<i>àhkónéyàk</i>	3P has defended him/herself
<i>àhkwááγàk</i>	3P has dressed him/herself
<i>àṅṅhíyàk</i> (telic)	3P (SG) undressed
<i>àṅṅhàk</i> (atelic)	3P (PL) undressed
Direct reflexive constructions with reflexive intensifiers <i>cidà/kidék</i>	
<i>àncówàk cidál / kídék</i>	3P has stabbed him/herself
<i>àhíbíyàk cidál / kídék</i>	3P has stabbed him/herself (several times)
<i>àhóyàk cidál / kídék</i>	3P hit him/herself
<i>àṅkòγmàtṅàk cidál / kídék</i> (telic)	3P (SG) has cut him/herself
<i>àṅkòγmàk idál / idék</i> (atelic)	3P (PL) have cut themselves

<i>àḡkúbìyàk cídá / kídék</i> (telic)	3P (SG) has covered him/herself
<i>àḡkúúḡbàk idá / ìdék</i> (atelic)	3P (PL) have covered themselves
<i>àḡàḡhàk cídá / kídék</i>	3P has scratched him/herself
<i>àḡḡlḡlḡk cídá / kídék</i>	3P has cut him/herself
Reflexive-possessive constructions	
<i>àḡḡḡḡhàk idàwùn</i>	3P has washed his/her hands
<i>àḡcìrééràk iléy</i>	3P has brushed his/her teeth
<i>céncìnìḡyàk ò</i>	3P is rubbing his/her eyes
<i>àḡdḡḡk káàm</i>	3P has tied his/her hair
<i>àḡdḡḡk yàntóáḡ yádì</i>	3P has tied a rattle him/herself to his/her leg
<i>àḡkálèḡmàk kàlḡḡí</i>	3P has bitten his/her tongue
<i>àḡkḡḡḡmàk káàm</i>	3P has cut his/her hair
<i>àḡḡḡḡhíyàk cìléy</i>	3P has pulled out his/her tooth
<i>céḡḡḡḡhàk cìléy</i>	3P is pulling out his/her tooth
<i>céḡḡkḡááḡk cḡḡí</i>	3P is wearing a piece of cloth / dresses him/herself
<i>àḡcḡyàk cḡḡí</i>	3P has put on a piece of cloth (onto himself)
<i>àḡḡḡḡhíyàk cḡḡí</i> (telic)	3P has pulled off the cloth
<i>àḡḡḡḡhàk ḡḡí</i> (atelic)	3P (SG/PL) has pulled off clothes
<i>àḡḡḡyàk kídólè yáàḡ</i>	3P has put a flower into her hair (lit. onto his/her head)
<i>céḡḡḡḡmàk idólè yáàḡ</i>	3P is putting flowers into her hair (lit. onto his/her head)
<i>àḡḡḡḡyàk kàḡḡááná wòràḡḡḡḡḡḡ</i> (telic)	3P has put the baby on his/her hip
<i>céḡḡḡḡḡḡ kàḡḡááná wòràḡḡḡḡḡḡ</i> (atelic)	3P is carrying the baby on his/her hip
<i>àḡḡḡḡḡḡḡḡk ḡàlèḡ yàḡḡḡḡḡḡ</i> (telic)	3P holds (has laid) a pen horizontally on his nose
<i>àḡḡḡḡḡḡḡḡk ìḡá yìwùlùḡ</i> (atelic)	3P has laid the children on his/her lap
<i>àḡḡḡḡyàk yáàḡ</i>	3P (PL) took it onto their heads
Autobenefactive constructions	
<i>àḡkòḡḡyàk</i>	3P has taken it with /for him/herself
<i>àḡḡḡḡḡyàk</i>	3P has taken it with /for him/herself
<i>àḡkḡḡḡyàk</i> (telic)	3P has caught it
<i>àḡkḡḡḡàk</i> (atelic)	3P (PL) caught it (SG/PL)
<i>àḡkòḡḡḡḡḡḡ</i>	3P has taken it with /for him/herself
Total:	26 verbal lexemes*

* Each verb is counted once independently of the number of constructions it participates in (e.g. *t̥hi/t̥uh* ‘pull’ is attested in direct and indirect reflexive constructions but is counted only once); telic/atelic variants of one and the same verb are not considered for counting purposes either.

The list might suggest that the reflexive derivation in Tima by means of the suffix *-ak / -ak* is overall more than moderately productive. Yet not all verbs that comply with the definitional criteria for the verbal bases of the reflexives (a two-participant verb with an agentive subject participant and a patientive object participant) are compatible with the suffix *-ak / -ak* (to generate the sense of coreference). Consider, for example, the verb *kwálà* ‘hide’. It is a transitive two-participant verb entailing an agentive initiator in the subject position and a patientive second participant in the direct object syntactic position, as demonstrated below:

- (97) *kícimbárí* *àŋ-kwálà=à=ṭáŋ* *káwùh*
 SG.child PERF3-hide=SOURCE=LOC3P SG.stone
 ‘The child hid the stone.’
 (STH20200203 1)

With *kwálà* ‘hide’, it is not possible, however, to construe an event where the two roles A and P are coreferential, i.e. where they refer to one and the same physical entity by means of verbal derivation. Instead, the analytic (or periphrastic) strategy has to be used. In the periphrastic construction, the reflexive nominal *kìdék* ‘neck’ or *cídá* ‘body’ fills the argument position of the second participant (in contrast to its usage as an intensifier, mentioned in 2.2.1.1 above), signaling that A and the argument expressed through the reflexive nominal refer to the same entity, as demonstrated in (98):

- (98) *kícimbárí* *àŋ-kwálà=à=ṭáŋ* *kìdék*
 SG.child PERF3-hide=SOURCE=LOC3P SG.neck
 ‘The child hid himself.’
 (STH20200203 1)

In (98), the reflexive nominal *kìdék*, indicating the referential identity of the two participant roles (A and P) entailed by the verb ‘hide’, occupies the direct object argument position; it is

anaphorically bound to the antecedent in the subject argument position; therefore, the syntactic position of *cídá/kídék* is fixed; it cannot move into clause-initial position and thus precede its antecedent. The underlying transitive argument structure is preserved in periphrastic reflexive constructions. Kemmer (1993) calls such periphrastic (or analytic) reflexive constructions ‘heavy’, referring to their heavier phonological weight as compared to morphological reflexives. So Tima belongs to the languages that have both reflexive strategies at their disposal: morphological derivation by means of a verbal reflexive marker and a periphrastic formation with an independent reflexive nominal.⁵⁵

As described above in section 2.1.1.1, a subgroup of direct reflexives (i.e. morphologically derived reflexives) also utilizes the same reflexive nominals *kídék* ‘neck’ and *cídá* ‘body’ to serve what has been called an intensifying or emphatic function; in these constructions, the reflexive nominals are used in addition to the verbal suffix *-ak / -ak*. The periphrastic constructions, in contrast, express the coreferentiality of participant roles exclusively by means of *kídék* ‘neck’ or *cídá* ‘body’ and the verbs receive no marking.

That the two functions – reflexive proper and intensifying marker – can be expressed by the same form is observed cross-linguistically (Kulikov 2013: 279). For Tima, then, we can also conclude that the reflexive nominal *kídék/cídá* can serve as a reflexive marker proper (in periphrastic reflexive constructions) and, in very restricted cases, as a reflexive intensifier additional to the verbal reflexive marker *-ak / -ak*. It would perhaps be too speculative to suggest the evolutionary path of the nominal reflexive from the intensifying function, in which the nominal *kídék/cídá* has a near-obligatory status in the reflexive constructions in combination with *-ak / -ak*, to the autonomous marker of coreferentiality, for example. Yet we do find some reports (e.g. Heine and Miyashita 2008: 202) of exactly such an evolution, i.e. from an intensifying function to a fully-fledged reflexive marker, in many African languages. As for Tima, it might suffice for the moment to conclude that, synchronically, the two functions of the reflexive nominals coexist and that in its intensifying function, the nominal is used in combination with the affixal strategy; in periphrastic reflexive constructions, it is used on its own as a sole reflexive marker.

⁵⁵ Haspelmath (forthcoming), summarizing the crosslinguistic findings on reflexive constructions, names three types of languages, distinguished by the main strategy employed in expressing the reflexive meaning: “[T]he great majority of languages have been reported to have either reflexive nominals or reflexive voice markers or both.”

The nominal nature of the reflexive markers used in periphrastic constructions (and as reflexive intensifiers) is a widespread phenomenon across languages. The following observations from the literature are noteworthy in this regard. For African languages, Heine (2000) identifies such lexical items as ‘body’ and ‘head’ as the most prominent sources for reflexive markers (other lexical sources being ‘owner’, ‘comrade’, ‘relative’, ‘life’, ‘soul’, and ‘person’ (Heine 2000: 9)). With *kìdék* ‘neck’, Tima consequently illustrates another lexical source of reflexive marking. Haspelmath (forthcoming) also mentions the cross-linguistic tendency for reflexive nominals to originate from the nouns ‘body’ and ‘head’;⁵⁶ the author attributes the acquiring of the reflexive notion to the process of metonymic extension. Haspelmath (ibid.) uses the term ‘reflexive pronoun’ for reflexive markers with a nominal nature, owing to the common usage of this label in the literature. When used in periphrastic reflexive constructions, *kìdék* and *cídá* do indeed serve more like functional elements, losing their referential content in these contexts so that they are more appropriately translated as ‘himself/herself/themselves’.

Overall, these periphrastic constructions in Tima show a great deal of semantic flexibility in terms of their compatibility with different verbs. From the morphosyntactic point of view, there is a requirement for the verbs used in the periphrastic construction to be two-participant verbs (similar to morphological reflexives) since the nominal reflexive *cídá/kìdék* occupies the syntactic position of the direct object.

From the semantic point of view, one of the crucial criteria with the periphrastic constructions is the pragmatic adequacy of the resulting coreferential constructions. Otherwise, there seem to be no lexical restrictions with regard to the eligibility of a given verb to form a periphrastic reflexive predicate.

In contrast to the morphological reflexives, periphrastic reflexive constructions are eligible with verbs derived for causative, for example. This is not feasible with morphologically derived reflexives because the suffix *-ak / -ak* and the causative *-Vk* fill the same slot in the verbal structure (see 1.3.4.1 on verb structure in Tima):

⁵⁶ Haspelmath (ibid.) further mentions the cross-linguistic study of reflexive markers by Schladt (1999), who states that half of the 150 languages investigated have reflexive markers derived from body-part terms.

- (99) *Álì àṅ-wùdál-y-ik=à=ṭáṅ kídék*
 Ali PERF3-burn-EP-CAUS=SOURCE=LOC3P neck
 ‘Ali has burnt himself (accidentally).’
 (STH20200209 3)

The causative operation renders the underlying intransitive verb *wùdál* ‘burn’ transitive (see 3.2.2 on the causative derivation), and the derived verb can thus enter the periphrastic reflexive formation.

Again, there is a general prohibition of the periphrastic formation with one-participant verbs. For example, the verb *múlùk* ‘hide (intrans.)’ is semantically similar to *kwálà* ‘hide’ discussed above (ex. (98)). Yet, while it is possible to build an analytic reflexive predicate with the latter verb (as in *àṅkwálààṭáṅ kídék* ‘3P hid him/herself’), the addition of the reflexive nominal with *múlùk* is not acceptable since there is no vacant place for it in the argument structure:

- (100) *kèṅlówúṅ à-múlùk=à=ṭáṅ *(kídék)*
 SG.hyena PERF3-hide=SOURCE=LOC3P
 ‘The hyena hid (itself)’
 (STA20200208 4)

What is important to point out is the complementary distribution of synthetic (i.e. morphological reflexives) and analytic (i.e. periphrastic) strategies in Tima: one and the same verb may be compatible either with the morphological or the periphrastic strategy to build a reflexive construction, but not with both strategies interchangeably.

There is only one example attested where one and the same verb, *kótr* ‘take’, is used both with the suffix *-ak /-ak* (yielding the autobenefactive notion ‘take for oneself’, see 2.2.1.2.2) and with the reflexive nominal, as shown in (101):

- (101) *Háámít àṅ-kótr kídék*
 Hamid PERF3-take neck
 ‘Hamid takes care of himself (lit. Hamid has taken/carried himself).’
 (STA20200208 5)

However, the sentence in (101) represents an idiomatic expression, i.e. it is a conventionalized fixed expression and thus represents an exceptional case here.

To close this short overview of the periphrastic reflexive formation in Tima as an alternative mechanism for expressing reflexivity, we can say that these constructions effectively close any lexical gap where the morphological reflexive formation cannot be implemented to indicate the coreference of participants.

2.2.2 One-participant middle verbs marked with *-ak / -ak*

This section describes a relatively large group of verbs attested with the suffix *-ak / -ak*, amounting to 47 lexemes out of some 400 verbs analyzed. As with the reflexive constructions, the one-participant middle constructions express a type of situation with a low degree of distinguishability of participants (in the sense of Kemmer 1993). Whereas the indistinguishability of participants in reflexives is due to the condition of role coreference (Subject=A+P), one-participant middles describe actions that remain in the sphere of the initiator, either due to the fact that the effect of the action accrues back to this initiating participant, or because there is no transfer of any effect from the initiator of an action to some distinct entity. Thus, with the middle, it is not by virtue of role conflation that no distinct participants can be conceptually differentiated but by virtue of the conceptual status of a single participant. That is, a one-participant middle predicate has a sole participant (hence the label one-participant middle) that exhibits aspects of both an agentive participant instigating the event and, at the same time, of a patientive participant being affected by the event. Conceptually, one-participant middles do not imply any distinct participant that could be affected by the activities carried out by A (in contrast to reflexive situation types where it is normally possible to construe a corresponding event as affecting some participant distinct from A). Linguistically, these conceptual dissimilarities between reflexives and one-participant middles find reflection in that most one-participant middles do not have underived transitive counterparts, which is in marked contrast to reflexives (see 2.2.1). Moreover, the majority of verbs presented in this section are lexicalized verbs with the suffix *-ak / -ak* being a petrified element of the verbal lexeme. The question of whether, diachronically, these lexicalized verbs were basically transitive verbs lies beyond the scope of the present investigation and cannot be answered in any meaningful way due to the lack of historical data.⁵⁷ Concerning the current findings, though, the assumption underlying the present analysis of one-participant middles is that the suffix *-ak / -ak* indicates the affectedness of the main participant or, in some restricted cases (see 2.2.2.3 and 2.2.2.4

⁵⁷ It is perhaps only possible to draw some conclusions based on better-documented languages that likewise, synchronically, have one-participant middle verbs bearing a reflexive(-like) marker. Looking at my native language Russian, it does not appear unusual that verbs bearing an unproductive middle/reflexive marker do not necessarily have transitive counterparts as their diachronic predecessors. For example, the verb *raz-bezhat'-sja* (RES-run-MID/REFL) 'take a run-up' is synchronically an intransitive verb, having as its basis the intransitive (synchronically and diachronically) verb *bezhat'* 'run'. See also Nava and Maldonado (2004), who give an analysis of Tarascan middles as derived from intransitive verbs.

below), events unfolding within the sphere of the main participant without implying any outward effect whatsoever (in accordance with the definition of the middle given by Smyth 1974).

In the following analysis of one-participant middles, crucial importance is accorded to the concept of an affected agent as used by Næss (2007). Recall that the ‘affected agent’ describes a participant that exhibits aspects of a prototypical agent by virtue of instigating the event; at the same time, this participant is affected by this same action, thus acquiring some aspects of a prototypical patient. Næss (2007) characterizes such a participant as [+INST, +VOL, +AFF], i.e. an instigating, volitional, and affected participant. Related to the above description is the concept of ‘affected entity’ proposed by Klaiman (1988), which describes the conceptual status of a subject argument that unites both an actor and the affected entity. In reflexive constructions, the affectedness component is more explicit since, due to coreferentiality, a single participant unites the roles of the agent, i.e. the initiator of the action, and the patient, the latter being defined as [+AFF]. In one-participant middles, on the other hand, the conceptual status of the main participant combines just aspects of an initiating and affected participant. Yet, both reflexives and the majority of one-participant middles can be represented by the following feature specification: [+INST, +VOL, +AFF], i.e. both situation types involve an affected agent in their conceptual structure (the small group of spontaneous events is an exception; see 2.2.2.6 below).

Syntactically, the lack of conceptual differentiation between the initiator of the action and its endpoint is reflected in the intransitive structure of one-participant middle events in many cases. However, the subgroups of ingestive verbs (2.2.2.1), as well as verbs of perception and cognition (2.2.2.2), may occur in transitive constructions as well (that is, in addition to their intransitive usage).

The one-participant middle group falls into relatively homogeneous semantic sub-groups, each expressing a particular situation type: a) ingestive verbs (2.2.2.1); b) verbs of perception and cognition (2.2.2.2); c) sound emission verbs (2.2.2.3); d) body posture/ motion verbs (2.2.2.4); e) verbs denoting body care actions (or grooming verbs) (2.2.2.5); and f) verbs expressing spontaneous or internally caused events (2.2.2.6). The following subsections examine these subgroups separately.

2.2.2.1 Ingestive verbs marked with *-ak* / *-ak*

The group of ingestive verbs is to a large extent comprised of lexicalized verbs, where the suffix *-ak* / *-ak* constitutes an integral unanalyzable part of the lexeme. A significant feature of the ingestive verbs pertains to their syntactic behavior in that they (may) occur in transitive constructions. That is, here, the primary function of the suffix *-ak* / *-ak* is not related to valency but is rather assumed to be semantically motivated; the suffix indicates the conceptual status of the subject participant as an affected agent. Before proceeding to the analysis of the semantic and syntactic features of ingestive verbs, first, the list of attested lexemes is presented.

Table 26. *Ingestive verbs.*

Verb base	Gloss	Derived construction (TAM3-root-(EP)- MID/REFL)	English translation
<i>dámà</i>	swallow	<i>à-dámà-y-àk</i> / <i>à-dámàná-àk</i>	3P has swallowed /swallowed (several times)
<i>(k)álá-</i>	eat	<i>àη-kálá-àk</i>	3P has eaten
<i>(k)áy-</i>	suckle	<i>àη-káy-àk</i>	3P has suckled
<i>mó-</i>	drink	<i>ò-mó-òk</i> ⁵⁸	3P has drunk
<i>kókòmàk</i> (lexicalized)	chew (dry food)	<i>àη-kókòmàk</i>	3P has chewed
<i>kòkòhàk</i> (lexicalized)	bite, gnaw	<i>àη-kòkòhàk</i>	3P has gnawed
<i>láámàk</i> (lexicalized?)	nibble, eat (a little bit)	<i>à-láámàk</i>	3P has nibbled/eaten a little bit
<i>mámhàk</i> (lexicalized)	suck	<i>à-mámhàk</i>	3P has sucked
<i>ηálhàk</i> (lexicalized)	lick (mostly of animals)	<i>à-ηálhàk</i>	3P has licked

⁵⁸ With the verb *mó-òk*, we are probably dealing with the vowel assimilation of the suffix to the vowel of the root. Note, also, that the root might have had the original form *mòk*, which can be inferred from the causative form of the verb: *mók-òk* (drink-CAUS). In *móòk*, the weakening of the root-final *k* might have occurred (see Dimmendaal and Schneider-Blum, in prep.: ch. “Verb”).

The representation of the base verbs in the table (the leftmost column) shows that the morphological status of the suffix *-ak/ -ak* varies with different verbs. Only one verb, *dšmà* ‘swallow’ has an unmarked transitive counterpart. *Kállá-àk* ‘eat’, *káy-àk* ‘suckle’, and *mó-àk* ‘drink’ have precategorial roots as their bases (see 1.2.2.2 on the definition of precategorial roots). The remaining verbs have *-ak/ -ak* as an unanalyzable part of the lexeme (except for *lámáàk* ‘nibble, eat (a little bit)’, which has an unclear morphological status).

The subgroups established on the basis of the morphological status of the suffix exhibit distinct morphosyntactic behavior as well (see below). Common to all of them is the possibility of being used in transitive constructions where the direct object referring to the object of consumption follows the verb directly without any additional marking, thus corresponding to the prototypical (Tima) transitive frame (see 1.3.2). The verb *dšmà* ‘swallow’ is rather exceptional in the context of the rest of the ingestive subgroup in that it can be used either with the transitivity marker *-i* (ex. (102) a)) or with the suffix *-ak* (ex. (102) b)):

- (102) a) *dšmě-y-í* *ìtúk!* or b) *dšmá-y-àk* *ìtúk!*
 swallow-EP-HT porridge swallow-EP-MID/REFL porridge
 ‘Swallow porridge!’
 (03.03.07-2-173.wav)

The contrastive morphological marking in (102) a) and (102) b) might be due to aspectual opposition: telic (a single action of swallowing) with the transitivity marker vs. atelic (iterative actions) with the suffix *-ak / -ak* (see 2.4.5 on the atelicity marking function of *-ak / -ak*).

The three verbs with precategorial roots as their bases, *kállá-àk* ‘eat’, *káy-àk* ‘suckle’, and *mó-àk* ‘drink’ can be used either transitively, with a direct object expressing the consumed item, or intransitively, without mentioning such an object. For convenience, I will call these three verbs ‘basic ingestive verbs’ in the following discussion, since they describe the most basic actions of taking in food or liquids essential for human existence.

The verbs *káyák* ‘suck (milk from the breast)’ and *móàk* ‘drink’ are extended by the MID/REFL suffix also with the direct object present. So, based on their behavior on the clausal level, the basic ingestive verbs exhibit patterns of syntactic lability, i.e. one and the same verb form is used in both transitive and intransitive constructions:

(103) a) *kárbáánà céŋ-káy-ák kímídi*
 SG.baby IPFV3-suck-MID/REFL SG.breast
 ‘The baby is suckling (milk from) the breast.’
 (03.03.07-2-179.wav)

b) *áy-àk!*
 suckle-MID/REFL
 ‘Suck!’ (milk from the breast)
 (03.03.07-2-176.wav)

(104) a) *kòhòmbìlí=lí m’-òk ídí*
 SG.donkey=FOC drink-MID/REFL water
 ‘The donkey is drinking water.’
 (13.04.09-01-06.wav)

b) *mùhì=yáy mà-à-m’-òk*
 try=LOC3P OPT2-drink-MID/REFL
 ‘Try to drink!’
 (STH20200209 3)

The verb *kálá-* ‘eat’ behaves differently in that the transitive construction requires the suffix *-uk* (see 3.2.3 below on the transitivity marking function of the suffix *-Vk*): *kálá-àk* ‘eat, be eating’ (intrans.) vs. *kálá-ùk* ‘eat it’ (with a direct object).

The syntactic lability of ingestive verbs has been observed in different languages with distinct typological profiles.⁵⁹ To account for the lability, Næss (2007) employs the notion of an affected argument as a measuring argument in a transitive situation type, as proposed by Tenny (1994). Tenny (1994) defines an affected argument as one that undergoes change as a result of the action described by the verb; it is the affected argument that sets the boundaries on the event and thus measures the event out (Tenny 1994: 158). Since the A participant of an eating event is inevitably affected by it (being satiated, or experiencing an unpleasant feeling of overeating, for instance), it can serve as such a measuring argument. Consequently, the verb ‘eat’ has two

⁵⁹ Næss (2007: ch. “Affected Agent”) provides an elaborated overview of the most prominent accounts of the deviating (i.e. labile) morphosyntactic behavior of ingestive verbs and offers her own semantic explanation.

potential measuring arguments that can delimit the event: the A participant, whose affectedness is determined by the state of being full, for instance, and the object of consumption, by being eaten up. When the speaker chooses to emphasize the affectedness of the A participant or the involvement of A in the process of eating (which is probably the most frequent pragmatic usage),⁶⁰ there is no need to add another measuring (and affected) participant. This pragmatic choice yields an intransitive construction. Otherwise, the transitive construction highlights the state of the consumed object as an affected argument.

The lexicalized ingestive verbs have only been attested in transitive constructions so far, with the object of consuming expressed as a direct object. For example:

- (105) *kíù* *àŋ-kòkóhàk* *kùùh*
 SG.dog PERF3-gnaw.MID/REFL SG.bone
 ‘The dog has gnawed at the bone.’
 (STA20200211 1)

- (106) *kíù* *cè-ŋálhàk* *kùùh*
 SG.dog IPFV3-lick.MID/REFL SG.bone
 ‘The dog is licking the bone.’
 (03.03.07-2-175.wav)

From the point of view of the English translational equivalents, the objectless predicates with some of the lexicalized verbs sound odd: e.g. ‘he is gnawing’ (?). However, as seen from the translation of individual verbs in Table 26 above, e.g. *kókòm.àk* ‘chew dry food’, ingestive verbs in Tima are relatively differentiated in terms of their semantic content, and it is likely that not all the nuances can be captured by the English counterparts. The lexical meaning of these Tima verbs already includes information on the kinds of things consumed. With such linguistic elaboration, it can be imagined that objectless constructions will be acceptable as well. A further semantic investigation will shed more light on this question. For the time being, we have to leave this topic with an observation that the lexicalized ingestive verbs align with the

⁶⁰ In their typological account of resultative constructions, Nedjalkov and Jaxontov (1988) observe that verbs meaning ‘to eat’ and ‘to drink’ can form the so-called “possessive resultative constructions”. Such constructions describe situations in which “the result of the action affects the underlying subject rather than the immediate patient of the action” (Nedjalkov and Jaxontov 1988: 9).

autobenefactive verbs described earlier (2.2.1.2.2), which are likewise only attested in transitive clauses. In both groups, the suffix *-ak / -ak* signals the conflation of the initiator and the endpoint (or the participant at the receiving end of the action). Further, the direct object participant follows the verb directly without any additional marking. Anticipating the argumentation below (2.2.2.2), it can be mentioned that the same morphosyntactic behavior is characteristic of some verbs of perception, which are likewise marked with the suffix *-ak / -ak*. Indeed, it is possible to postulate a conceptual link unifying these three subgroups – verbs of ingestion, verbs of acquiring, and verbs of perception – namely, that they have an analogous event structure in that the action initiated by the A participant has as its termination point the same participant (who is, consequently, an affected entity).⁶¹ That is, the verbs in the subgroups have in common the middle semantics as defined earlier; the employment of the suffix *-ak / -ak* serves as a linguistic reflection of the conceptual wholeness of the initiator and the endpoint rather than having an intransitivizing effect as its main function (cf. also the low distinguishability of participants as a definitional criterion of the (semantic) middle category as pointed out by Kemmer 1993; see 1.2.2.2).

The predominance of the lexicalized verbs in the ingestive group can be explained by the fact that agent-affectedness is part of their inherent lexical meaning.⁶² Næss (2007: 72ff), for example, observes that cross-linguistically the affectedness of the subject of ingestive verbs is obligatorily marked with a reflexive marker,⁶³ i.e. a marker normally signaling the affectedness

⁶¹ Haspelmath (1994) invokes the notion of agent affectedness to account for the capability of such verbs as ‘eat’ and ‘drink’, but also ‘learn’, ‘see’, ‘put on’, and ‘wear’, to form resultative participles that are normally associated with constructions that predicate of a patient-like argument, i.e. a participant who is affected as a result of the action described. In his (Haspelmath 1994: 161) words, “[W]hat ‘drink’, ‘eat’, ‘learn’, ‘see’, and ‘put on’, ‘wear’ have in common is that the agent is saliently affected by the action.”

⁶² The affectedness component finds its reflection in some languages when the reflexive marker is used in contexts of eating until full or overeating. E.g. German *sich vollessen* (REFL full.eat) from *essen* ‘eat’, Russian *ob-jest’-sja* (PERF[OVER]-eat-MID/REFL), or *na-jest-sja* (PERF[RES]-eat-MID/REFL) ‘eat enough, be/get satiated’ from *jest* ‘eat’. Næss (2007: 74-75) also gives examples of this usage of reflexive markers with ingestive verbs in Austronesian and Australian languages.

⁶³ Some authors put forward explanatory analyses of the irregular behaviour of the ingestive verbs, particularly, under causativization, assuming a priori their inherent reflexivity (e.g. Jerro (2019) following Krejci (2012)). Krejci (2012) explains the possibility of morphological causativization (through affixation) – normally restricted to intransitive verbs – resorting to the lexical meaning of the ingestive verbs that, according to the author, lexicalize in their semantic structure a causative event (‘cause oneself to eat’). True causativization, then, represents the process of ‘anti-reflexivization’, whereby the two co-referent arguments in the base verb, the Actor, who actually

of the Agent. The frequent usage of these verbs with markers of affectedness might have prompted the lexicalization process, resulting in the reanalysis of the suffix as an integral part of the lexeme.

There is an interesting semantic aspect to the distribution of the ingestive verbs with respect to their ability to participate in causative alternation: the three basic ingestive verbs ‘eat’, ‘drink’, and ‘suck (milk)’ allow morphological causatives (see 3.2.2 on causative constructions) to be formed with the causative suffix *-Vk* being attached to the root instead of the suffix *-ak / -ak*, e.g.:

(107) *cíbá* *céη-kááá-àk*
 SG.child IPFV3-eat-MID/REFL
 ‘The child eats/is eating.’
 (STA20200206)

(108) *wéèn* *àη-kááá-ik* *cíbá*
 SG.mother PERF3-eat-CAUS SG.child
 ‘The mother feeds the child.’
 (STA20200206)

The other basic ingestive verbs behave similarly:

Ingestive verb (TAM3-root- MID/REFL)	English translation	Causative construction	English translation
<i>àη-káy-àk</i>	3P has suckled	<i>wéèn àη-káy-ik cíbá</i>	The mother breastfed the child
<i>à-mó-òk</i>	3P has drunk	<i>wéèn à-mók-òk cíbá</i>	The mother let the child drink

The remaining (lexicalized) verbs cannot form morphological causatives. This distribution might be due to the semantic component of MANNER implied by the lexical meaning of verbs not eligible for causativization; that is, each lexeme is associated with a particular way of consuming that can be performed only by the consumer herself. Whereas one can feed someone or make them drink by direct physical manipulation (which is mostly presupposed with

eats the food, and the Causer, who performs the feeding action, are delinked: the Actor (Eater) role is assigned to another referential entity. Therefore, no additional operation to introduce the new Causer role is required.

morphological causatives), e.g. by spoon-feeding, making someone gnaw at the bone, for example, is only imaginable in a context of indirect causation – by telling them to do so.

The distribution of ingestive verbs marked with *-ak / -ak* as compared to other (unmarked) verbs from the same semantic field is also noteworthy. Only three additional lexemes (beyond the nine lexemes presented in Table 26) have been attested so far:

Table 27. Unmarked ingestive verbs

Verb base	English gloss	Transitive/ intransitive usage	Example	English translation
<i>kəmáh</i>	eat	transitive	<i>àḡkəmáh iḡúk</i>	3P has eaten porridge
<i>kímán</i>	eat enough/ be satiated	transitive/intransitive	<i>àḡkímán/ àḡkímán kábóh</i>	3P has eaten enough/is satiated/ 3P has eaten enough meat/ is satiated with meat
<i>múr-í</i> (gnaw-HT)	gnaw	transitive	<i>àmúrí kábóh</i>	3P has gnawed meat

That is, the verbs marked with *-ak / -ak* apparently largely cover the semantic field of consumption and ingestion in Tima.

2.2.2.2 Verbs of perception and cognition

The perception and cognition subclass of verbs marked with the suffix *-ak / -ak* comprises eight verbs. Three are lexicalized verbs, with the suffix *-ak / -ak* being an unanalyzable part of the lexeme. The verbs of perception and cognition correspond to the definition of one-participant middles by virtue of the conceptual inseparability of the initiator and the endpoint (corresponding to the definition given by Kemmer 1993). Here, the thematic role of the main participant is the Experiencer, who is simultaneously the initiator and the endpoint of the sensory input associated with events described by the verbs involved.

The Experiencer role implies a stimulus that triggers the state of experiencing a particular sensation. Crucially, the Stimulus differs qualitatively from the typical Patient in that it does not represent an affected entity. Accordingly, we might expect the morphosyntactic coding of

clauses with an Experiencer and a Stimulus to deviate from the transitive prototype (see 1.2.2.2 for the theoretical underpinning of this issue).

In Tima, it is possible to overtly express the Stimulus argument of a verb of perception or cognition (only the verb *máttak* ‘watch, glance’ is an exception (see below)). The morphosyntactic mechanisms to express the Stimulus are quite heterogeneous across the whole group. For convenience, the (optional) Stimulus marking is represented in Table 28, which lists the attested verbs of perception and cognition. However, it is equally possible not to mention the Stimulus; the focus is then on the inner mental state of the Experiencer, and the syntactic structure accommodating such a conceptualization is intransitive (this behavior is reminiscent of the basic ingestive verbs described above). The list of verbs of perception and cognition is shown in Table 28:

Table 28. Verbs of perception and mental processes marked with *-ak* / *-ak*

Verb base	Gloss	Derived construction (TAM3-root-MID/REFL)	English translation	Morphosyntactic means to express the stimulus participant	Example	Translation
<i>dùh/dùùh</i> ⁶⁴	sniff	<i>àn-dùh-àk</i>	3P has sniffed	unmarked DO	<i>àn-dùh-àk kúúh</i>	3P sniffed at the bone
<i>kùmún</i>	find, see	<i>àη-kùmún-àk</i>	3P has remembered, understood, recognized	unmarked DO	<i>àn-kùmún-àk káhu</i>	3P remembered the name
<i>lèm/léem</i>	taste	<i>à-lèm-àk</i>	3P has tasted	unmarked DO	<i>à-lèm-àk ìtúk</i>	3P tasted the porridge
<i>ηλ/ηλλ</i>	sniff/smell	<i>cé-ηλλ-àk</i>	3P is sniffing	unmarked DO	<i>à-ηλ-àk kàðlè</i>	3P sniffed at the flower
<i>ηàh</i>	see/watch	<i>cé-ηàh-àk</i>	3P is watching	DO not expressible when <i>ηah</i> is extended with <i>-ak</i>	<i>à-ηàh-àk à-ηàh ihòòk</i>	3P looked out 3P watched the birds
<i>(kì)líηak</i> (lexicalized)	look after, overlook, tend	<i>à-línak</i>	3P has overlooked	+verbal instrumental <i>-aa</i> , DO unmarked	<i>àη-kìlíηak-áá kàràη</i>	3P looked after the field
<i>míntak</i> (lexicalized)	hear/listen	<i>cé-míntak</i>	3P is listening	+verbal instrumental <i>-aa</i> , DO unmarked	<i>à-míntak-áá ìámáá</i>	3P listened to the talk

⁶⁴ The verb forms after the slash sign are the pluractional forms (see 1.3.4.4 on pluractionality).

<i>máʔlák</i> (lexicalized)	watch, glance	<i>cé-máʔlák</i>	3P is watching	The expression of the Stimulus argument is not possible	not possible	-
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What is immediately observable from the table is the correlation between the status of the suffix *-ak / -ak* (whether it is lexicalized or not) and the morphosyntactic mechanism to introduce the Stimulus argument. The unmarked DO (direct object) with non-lexicalized verbs means that the Stimulus participant follows the verb derived for *-ak / -ak* directly, without additional marking. The usage of the verb *dùhák* ‘sniff’ illustrates the point:

- (109) *kúù* *án-dùh-ák* *kúúh*
 SG.dog PERF3-sniff-MID/REFL SG.bone
 ‘The dog was sniffing at the bone.’
 (STA20200211 1)

The lexicalized verbs require the verbal instrumental marker *-aa* (see 1.3.4.3.3) in order to introduce the Stimulus participant, as exemplified in (110) with the verb *mínták* ‘hear, listen’:

- (110) *céé-mínták-áá=dà* *kàhúnèn* *í-lèlmók*
 IMPVF1SG-hear.MID/REFL- SG.woman PST-shout
 INS=1SG
 ‘I hear a woman shouting (lit. I hear a woman who is shouting).’
 (STH20190129 5)

The verb *háàh* ‘look, see, watch’ displays an exceptional morphosyntactic pattern within the group. Whereas all the other verbs with *-ak / -ak* in Table 28, including the lexicalized verbs, permit both objectless⁶⁵ predicates and predicates with an object referring to the stimulus (except for *máʔlák* ‘glance, look’), *háàh-àk* is only attested in propositions without the stimulus

⁶⁵ The omission of the object can be explained here by the principle of one measuring argument per clause, as outlined in the discussion of the labile syntax of ingestive verbs (see 2.2.2.1). Recall that an event can be ‘measured’ by the degree of affectedness of the participant. Since the subject of verbs of perception and cognition (or mental processes in general) is such an affected participant, there is no need to add another participant as a measuring argument to render the proposition conceptually complete.

participant, i.e. the derived form is permitted in intransitive constructions only, as illustrated in (111) below. With the underived *ɲáàh*, the stimulus participant must be mentioned (ex. (112)):

- (111) *ká-á-ɲáàh-àk* *àlàkòó-w=óɲ*
 NEG-2SG-see-MID/REFL back-EP=NEG
 ‘Don’t look back!’
 (Schneider-Blum and Dimmendaal 2013: 229)

- (112) *ó-ɲáàh-ə-ná* *cídákòó=lí=yè* *ó-tòò*
 PERF3-see-EP-1SG.ERG somebody=FOC=REP PST-pass
 ‘I noticed/ thought/ saw (that) someone moved past.’
 (Schneider-Blum and Dimmendaal 2013: 232)

It is noteworthy that the verb *ɲáàh* ‘see, watch’ is attested in a periphrastic construction with the reflexive nominal *kìdék* ‘self’ (lit. ‘neck’) that is normally used to express coreferentiality between A and P (see 2.2.1.3 above):

- (113) *ɲáàh* *kìdék*
 see neck
 ‘Watch out/be careful.’ (a shortened version of ex. (51) in the original article)
 (Schneider-Blum and Dimmendaal 2013: 232)

In this regard, the verb *ɲáàh* ‘see’ is rather exceptional; other verbs of perception do not allow the alternative expression by means of a periphrastic construction. Presumably, the expression *ɲáàh* *kìdék* in (113) has an idiomatic status.

The verb *màtāk* ‘watch, glance’ differs in terms of its morphosyntactic performance from the rest of the group as well in that it does not allow the expression of the Stimulus argument. The only attested usages show a possible extension with adverbs indicating direction, as in (114) below:

- (114) *Háámít à-máṭák pádḡḡàṛák*
 Hamid PERF3-glance.MID/REFL upwards
 ‘Hamid glanced upwards.’
 (07.04.09_21-05.wav)

However, we do find the verb *máṭák* in constructions where a second participant can be introduced by means of the verbal instrumental suffix *-aa*. However, with *máṭák*, the added participant has a Path role (‘look through’), not Stimulus, as demonstrated in (115):

- (115) *máṭák-áá kókwan*
 watch.MID/REFL-INS SG.door
 ‘Look through the door!’
 (STH20190131 6)

The non-lexicalized verbs *dùh/dùùh* ‘sniff’, *lèm/lèèm* ‘taste’, *ḡáàh* ‘watch/see/look’, and *ḡál/ḡáll* ‘sniff’ permit some variation in the construal of events involving the sense modalities expressed by the lexical root. With *dùh*, *lèm*, and *ḡál*, it is possible to build telic predicates by extending the verbal root with the transitivity marker *-i / -r*; these forms designate punctual actions of registering a smell or taste. When derived with *-ak / -ak*, a durative reading is induced.

The following two sentences exemplify these two options:

- (116) *kúù àn-dùùh-ák kúúh*
 SG.dog PERF3-sniff-MID/REFL SG.bone
 ‘The dog was sniffing at the bone.’
 (STA20200205 4)

- (117) *kúù àn-dùh-í kúúh*
 SG.dog PERF3-sniff-HT SG.bone
 ‘The dog registered the smell of a bone.’
 (STA20200205 4)

Example (116) focuses on the process of sniffing, and the sentence in (117) renders the action punctual. As seen from the translations in (116) and (117), the morphological distinction – the root suffixed by *-ak / -ak*, on the one hand, or by *-i / -r*, on the other – serves to differentiate

between what Viberg (2014) terms the controlled activity and the uncontrolled experience. That is, for these three verbs, *dùh/dùùh* ‘sniff’, *lèm/lèèm* ‘taste’, and *ηλ/ηλλ* ‘sniff/smell’, the opposition (controlled) activity vs. the (uncontrolled) experience is conveyed by the same verbal lexemes with different morphological marking.

The remaining verbs do not allow morphological differentiation along the lines just described. The lexicalized verbs *línλk* ‘look after, overlook, tend’ and *μάλλk* ‘glance’ describe controlled activities. With *ηάàh* ‘see, watch’ and the lexicalized *míntλk* ‘listen, hear’, it is assumed that the intended meaning is conveyed unequivocally to the hearer by means of contextual framing. The following example pair demonstrates the controlled activity (ex. (118)) and the (uncontrolled) experience usage (ex. (119)) of *míntλk* ‘listen/hear’:

(118) *míntλk!*

hear

‘Listen!’

(22.09.07-118.wav)

(119) *cè-míntλk=áá=dà* *kλhúnèn* *ì-léélmòk*

PERF1SG-hear=INS=1SG SG.woman PST-shout

‘I heard (noticed) a woman shouting.’

(STH20190129 5)

The derived verb *kúmún-λk* ‘recognize, understand, remember’ expresses an uncontrolled experience. Below, the information on the cognitive status – controlled activity or uncontrolled experience – associated with the verbs of perception and cognition is summarized:

Table 29. The cognitive status associated with verbs of perception and cognition

Verb of perception/cognition	Gloss	Controlled activity	Uncontrolled perception
<i>dùh-λk</i>	sniff	+ (by adding HT to the root)	+
<i>lèm-λk</i>	taste	+ (by adding HT to the root)	+
<i>ηλ-λk</i>	sniff/smell	+ (by adding HT to the root)	+
<i>ηάàh-λk</i>	see/watch	+ (context-dependent)	+ (context-dependent)
<i>míntλk</i> (lexicalized)	hear/listen	+ (context-dependent)	+ (context-dependent)
<i>línλk</i> (lexicalized)	look after, overlook, tend	+	-

<i>máʔlak</i> (lexicalized)	watch, glance	+	-
<i>kùmún-lak</i>	find, see	-	+

Except for *kùmúnlak* ‘recognize, understand, remember’, all the verbs in this subgroup describe sensory perception. The verb *kùmúnlak* has as its base the two-participant verb *kùmún*, meaning ‘see, find’; however, in its derived form, it acquires an idiosyncratic meaning ‘know, recognize, understand, remember’, i.e. it describes a cognitive process or a mental state. Note that the semantic extension from ‘see’ (which is one of the meanings of *kùmún* in Tima) to ‘know’, i.e. from the perceptual to cognitive domain, is attested in a number of languages (see, e.g., Sweetser (1990), who suggests a universal path ‘see’ > ‘know’; see also Evans and Wilkins (2000)). What is special in the case of the Tima verb *kùmún-lak*, though, is the fact that it is the form *kùmúnlak*, i.e. the root extended by the marker designating the affectedness of the subject participant that acquires the particular meaning ‘understand, recognize, remember’.⁶⁶ The underived form *kùmún* ‘see, find’ does not have such an implication. The next example pair contrasts the derived construction containing *kùmún* in (120) with the corresponding underived construction in (121):

- (120) *céŋ-kùmún-lak=à=ʔáŋ=dɔ* *kɔhú*
 IPFV3-see-MID/REFL=SOURCE=LOC3P=1SG SG.name
 ‘I remember the name.’
 (STA20200212 1)

- (121) *áŋ-kùmún* *kàcimbári*
 PERF3-find SG.child
 ‘(S)he has found the child.’
 (STH20200201 4)

As is the case for the whole group of perception/cognition verbs (Table 28), the suffix *-lak* does not affect the valency of the base verb in *kùmúnlak*; the addition of the suffix is purely semantically motivated, expressing the conflation of the initiating and the affected entities in one argument. The resulting structure exhibits a labile syntactic behavior: it can be framed

⁶⁶ It should be noted that, despite the idiosyncratic character of the derived construction, the meaning ‘know, remember, understand, recognize’ is still relatable to the base verb *kùmún* ‘find, see’ and can be described metaphorically as ‘find/see in one’s mind’.

either transitively, in which case the Stimulus participant is encoded as a direct object following the verb without any additional marking, as in (120) above, or intransitively, with the Experiencer in the subject syntactic position as the sole core argument, e.g.:

- (122) *dámák àŋ-kùmún-àk=á=àŋ=dà*
 then PERF3-see-MID/REFL=SOURCE=LOC3P=1SG
 ‘Then I remembered.’
 (STA20200212 1)

So far, the verbs in the perception subgroup have been described as having an A referent who is animate and, by virtue of being animate, is a sentient participant capable of perceiving sensations of different kinds. Two verbs, *míntàk* ‘hear’ and *ŋáàh-àk* ‘see’, also allow stimulus-based constructions with inanimate subject participants:

- (123) *kì-hí à-mál ŋáàh-àk*
 SG-place STAT-good see-MID/REFL
 ‘The place looks nice.’

- (124) *kòŋònéél à-mál míntàk-ìŋ*
 singing STAT-good hear.MID/REFL-VEN
 ‘The singing sounds good.’

(Schneider-Blum and Dimmendaal 2013: 231, original examples (43) and (44), glossing changed)

Furthermore, with *ŋáàh-àk* ‘see’ and *míntàk* ‘hear’, a potential construction can be built: *kò-ŋáàh-àk-ìŋ* (POT-see-MID/REFL-VEN) ‘can be seen/is visible’, *kì-míntàk-ìŋ* (POT-hear.MID/REFL-VEN) ‘can be heard/is audible’ (Schneider-Blum and Dimmendaal 2013: 231). Stimulus-based and potential constructions show a strong affinity to passive-like constructions in that they have a subject with more prominent patientive features. The possibility of conveying the potential meaning with verbs marked with *-àk / -ak* might be interpreted as a further indication of the middle sense of the suffix activated with these verbs.

The verbs presented in Table 28 above (eight lexemes out of some 400 verbs analyzed) broadly cover the semantic field of verbs of perception and cognition in Tima. Additionally, four lexemes without *-àk / -ak* have been attested so far as describing perception/cognition

eventualities. Concerning the perceptual modality, aside from the aforementioned *kùmún* ‘find, see’ (mainly attested in contexts with the meaning ‘find’), Tima has yet another verb referring to visual perception, *méeé* ‘look at, examine, visit’:

- (125) *kìcimbárí à-méeé-y-í wéèn*
 SG.child PERF3-look.at-EP-HT SG.mother
 ‘The child looked at his mother.’
 (STH20190131_6)

As the English translation hints at already, this verb seems to imply a greater degree of intentionality, i.e. it presupposes a more agentive and less affected initiator. The agentive semantics of the verbal root correlates with its morphosyntactic realization: *méeé* is used exclusively in transitive constructions, and the second participant – the goal of intentionally directed attention rather than the Stimulus – is obligatory. The detransitivization operation is not available with *méeé* ‘look at, examine, visit’.

Aside from *kùmúnàk* ‘recognize, understand, remember’, two other verbs attested in the database and belonging to the domain of cognitive processes are the intransitive verb *díndíñ* ‘think’, as in, e.g., *cén-díndíñ=dà* (IMPERF1SG-think=1SG) ‘I am thinking’, and the transitive verb *hì* ‘know’, e.g. *kì-hì-y-áá=dà ñámáá* (POT-know-EP-INS=1SG language) ‘I know the language’.

Before leaving this discussion of the verbs of perception and cognition, a couple of words should be said concerning some unclear cases. Three further verbs, not included in the subgroup, but suggesting a close semantic affinity to it by virtue of designating internal mental processes and having an Experiencer as the subject, are the base two-participant verbs *dùdú* ‘show, explain’, *məlé* ‘wait’, and *pólá* ‘want, like, look for’. These verbs can be derived by *-ak* / *-ak*, yielding the intransitive verbs *dùdúwàk* ‘learn/study’, *məláàk* ‘wait, stay, remain’, and *pólààk* ‘look for/want/like’, i.e. when derived, these verbs do not permit the addition of a direct object:

Transitive construction (TAM3-root-(EP)-HT)	English translation	Derived construction (TAM3-root-(EP)-MID/REFL)	English translation
<i>cé-məlé-é wàyén</i>	3P waits for the father	<i>cé-məlá-àk</i>	3P is waiting

<i>cén-dùdú-w-í támáá</i>	3P explains/shows the language/talk	<i>cén-dùdú-w-àk</i>	3P is learning/studying
<i>àm-pślá cibóónín</i>	3P likes the girl	<i>cém-pślá-àk</i>	3P is looking (for sthg.)

When we look at these verbs from a purely semantic point of view, i.e. in terms of the feature specification of the participants and their relational properties with regard to the predicate, the middle sense appears to be the underlying motivation for the recruitment of *-ak / -ak*. The subject participant of these verbs can be characterized in terms of the Experiencer role and the omitted object as Stimulus. As we said above, an Experiencer is a participant who is affected by some mental, sensory, or emotional process; by virtue of this, it represents simultaneously the initiator and the endpoint of the event described by the predicate, thus corresponding to the conceptual definition of the middle adopted in this analysis. That is, waiting is an internal process akin to introverted mental processes; the object of waiting cannot be regarded as an affected participant, and thus as the endpoint of an effect stemming from the activity of A; it is rather the cause of a particular emotional or mental state on the part of the subject of waiting and thus corresponds more to the definition of a Stimulus argument. And the A participant implied by these verbs exhibits the features of an affected agent, i.e. [+INST, +VOL, +AFF]. Indeed, with the verb *mǝlé* ‘wait’ we have additional intra-linguistic evidence that points toward the underlying middle semantics associated with this verb. The related verbal noun *kǝmǝléél* has the meaning ‘patience’ (aside from ‘waiting’); patience is apparently more akin to the middle semantics, describing a quality, i.e. something that is in the sphere of the subject and, as such, constitutes the manifestation of middle semantics as was defined in the introduction to the present chapter. Furthermore, the verb itself bears the meaning ‘remain, stay’ (aside from ‘wait’), which conceptually corresponds to one-participant middle events which presuppose no further participants in the event structure. So, a more in-depth language-internal analysis of verbal lexemes and their meanings can help us arrive at a more accurate interpretation of the multifunctional grammatical element which is the suffix *-ak / -ak*.

Likewise, the endpoint of the event described by the verb *dùdúwàk* ‘learn, study’ is clearly the initiator of the process of learning. The learning process resembles the ingestive verbs when looked at metaphorically; when we learn something, we take in or consume the knowledge. And, as was noted in 2.2.2, the verbs of ingestion are similar to verbs with meanings such as ‘learn’, in that with such verbs “the agent is saliently affected by the action” (Haspelmath 1994: 161). The verb *pślá* has in its semantic scope such notions as ‘look for’, ‘want’, and ‘like’. The

Experiencer role of the A participant surfaces quite saliently with these meanings as well. The participant affected by the action of looking for something, for example, is the initiator itself, since the action describes an internal process akin to other mental processes. There is no extroverted effect associated with the action of A; the object participant is unlikely to be affected by being looked for. With two other senses, ‘want’ and ‘like’, the same line of reasoning applies. The participant affected by the events denoted, i.e. its endpoint, is the initiator of the same event. Thus, conceptually, we are dealing with the low differentiation of participants that is characteristic of middle situation types.

My hesitance regarding the inclusion of these three verbs into the group of perception and cognition verbs is due to the following factors. Firstly, the verbs with the meanings ‘wait’, ‘learn/study’, and ‘like/want’ are not prototypical verbs designating perception and cognitive processes. A more general overarching label, such as ‘verbs of mental processes and states’, for example, would perhaps somewhat alleviate this issue.

Secondly, yet connected to the semantic fuzziness that precludes a straightforward assignment to a specific semantic group, the surface syntax of derived constructions with *-ak / -ak* might suggest that the alternation in question represents an antipassive operation (described in section 2.4 below). That is, the antipassive function of the morpheme *-ak / -ak* exhibits the same morphosyntactic behavior as seen with the verbs discussed here: the derivation yields an intransitive construction with the original P argument omitted and the original A argument remaining the sole core argument in its original syntactic position. In such cases, which are not clearly determinable, we should look more deeply into the functional distribution of the (multifunctional) morpheme in question. As Maldonado (2005: 187) puts it, “surface phenomena must always be evaluated with reference to the whole system [of a particular language: NV]”.⁶⁷ That is, the criteria of both functions should be weighed out carefully to enable a more accurate interpretation based on language-internal evidence. As will be seen from the discussion of the antipassive function of *-ak / -ak* in 2.4 below, it is such criteria as the

⁶⁷ Indeed, few accounts deal in a consistent way with not-so-clear cases of the interpretation of a multifunctional morpheme in a language, and, more often than not, the preference is given to structural aspects since these are much easier to observe. Maldonado (2005) is a notable exception here. The author examines the functional distribution of the morpheme *se* in Spanish where, similarly to Tima, it serves multiple functions including middle-reflexive and antipassive. Maldonado (2005) questions the antipassive interpretation of the morpheme *se* in Spanish with a number of constructions given in previous analyses and provides a detailed argumentation for the middle semantics of the constructions analyzed. Maldonado’s (2005) main point of critique is the uncautious reliance on structural properties without any concern for the underlying semantics and functional distribution.

entailment of an affected object participant distinct from A that is typical of the antipassive derivation in Tima (contrary to the one-participant middles described here, where it is the A participant who is simultaneously the acting and the affected entity). As was hopefully made clear by the discussion above, the verbs meaning ‘wait’, ‘learn/study’, and ‘want/like/look for’ lack such a specification, having an affected agent in their conceptual structure and not an affected object, thus ruling out the antipassive interpretation.

Thus, even though the surface realization of the derived construction with *mólé* ‘wait, remain, stay’, *dúdí* ‘show, explain’, and *pólá* ‘look for, want, like’ is identical to the antipassive in Tima, here, the usage of the derivational morpheme *-ak* is semantically motivated – an indication that the initiating and the affected participant are the same entity (the domain of the middle function). As seen from the need for a lengthy elaboration on the motivations for the middle analysis, the decision as to which category to assign the attested form to is not always straightforward; structural identity does not always imply functional identity.⁶⁸

To summarize this section, the semantic notion of an affected entity associated with the Experiencer thematic role of the A participant can be appealed to in order to account for the grouping together of the verbs of mental processes and perception. The category ‘affected argument’ has proved instrumental in the analysis of the morphosyntactic performance of verbs with middle semantics, regarding, for example, the mechanisms underlying the object deletion with these verbs. The various subgroups reveal different morphosyntactic properties at the syntactic level. Some verbs retain the transitive structure of the base verbs after derivation, i.e. an unmarked DO participant is allowed without any additional marking. Other verbs, most notably lexicalized perception verbs, require verbal instrumental marking to license the addition of further arguments. And lastly, individual verbs exhibit syntactic patterns typical for

⁶⁸ As Lehmann (2015: 1548) notes, “[t]he association of form and function in the language is not biunique. A classification of semiotic entities, including grammatical ones, by semantic criteria, yields different results from a classification based on formal criteria.” His solution is to approach the verbal classification from two perspectives: the semasiological (formal) and the onomasiological (functional) (ibid.). The semantic map approach pursued in this work offers an intermediate solution to the problem of verb classification: with the assumed functional motivation, there is no need to divide the constructions into purely semantic and purely morpho-syntactic phenomena. What is required is to observe and try to establish (semantic) criteria that favor a particular reading of the multifunctional element. As can be seen from the opposition (described in 2.2.1.2.1) *àmbàrhàk idàwùn* ‘3P washed her/his hands’ (reflexive-possessive reading) vs. *àmbàrhàk* ‘3P did the washing’ (antipassive reading), it is not only the lexical properties (including the subcategorization for thematic roles) but the syntactic properties that have to be taken into account.

antipassives (as described in section 2.4 below): the addition of the second participant is precluded after derivation. Based on these observations, we can conclude that semantically related verbs can be distributed in a not entirely systematic and coherent manner across the available morphosyntactic frames.

2.2.2.3 Verbs of sound emission

The number of verbs attested in the database describing speech actions and sound emission marked with the suffix *-ak* / *-ak* amounts to eleven lexemes (out of some 400 verbs analyzed).

The next table shows the attested verbs subsumed under the subclass of sound emission.

Table 30. Verbs of sound emission and speech action

Verb base	English gloss	Verb form with 3 rd person A participant (TAM3-root:MID/REFL)	English translation
Animal sounds			
<i>báηlak</i>	bark	<i>àm-báηlak</i>	3P has barked
<i>tíirak</i> ⁶⁹	growl, crow, rumble, roar	<i>àn-tíirak</i>	3P has growled
Speech actions			
<i>dùùh(lak)</i> ⁷⁰	pray	<i>àn-dùùh lak</i>	3P has prayed
<i>kàyírlak</i>	speak	<i>àη-kàyírlak</i>	3P has spoken
<i>ḡàná-</i>	call, address	<i>àn-ḡàná-àk</i>	3P has been calling/ has cried out
<i>tónak</i>	sing	<i>cén-tónak</i>	3P is singing
Emotive speech actions			

⁶⁹ The lexeme *tíirak* seems to have a general meaning of making a rumbling kind of noise and usually describes animal sounds like growling, roaring, etc., but also the sound of thunder. By way of metaphorical extension it can also refer e.g. to stomach rumbling: *kúùh céntíirakḡèén* ‘My stomach is growling’.

⁷⁰ The verb *dùùh lak*, with the meaning ‘pray’, represents an idiosyncratic lexicalization of this particular meaning. The underived counterpart *dùh-/dùùh*, with the meaning ‘smell, sniff’, is also attested (see 2.2.2.2 above).

<i>cikṭṭàk</i>	complain	<i>àn-cikṭṭàk</i>	3P has complained
<i>mòrúmòrṭàk</i>	plead	<i>à-mòrúmòrṭàk</i>	3P has pleaded
Verbs describing a particular manner of speaking			
<i>ṭàlmàk⁷¹</i>	move the tongue	<i>àn-ṭàlmàk</i>	3P has moved the tongue (referring to speaking in a particular manner)
<i>ṭàlwàlwàk</i>	mispronounce	<i>àn-ṭàlwàlwàk</i>	3P has been mispronouncing (of a slip of the tongue)
Sounds related to bodily processes			
<i>ṭwàràk</i>	snore	<i>céṭ-ṭwàràk</i>	3P is snoring

All of the verbs expressing sound emission – with one exception – are lexicalized items that do not have unmarked counterparts. The verb *ṭànà* ‘call, address’ is an exception here. It is a base transitive verb implying two participants – the speaker and the addressee (ex. (126)); *ṭàna* ‘call, address’ can be detransitivized by means of the suffix *-ak* (ex. (127)):

- (126) *Álì* *àn-ṭànà* *Ábòh*
 Ali PERF3-call Aboh
 ‘Ali has called Aboh.’
 (STA20200206)

- (127) *Álì* *án-ṭànà-àk*
 Ali IPFV3-call-MID/REFL
 ‘Ali is calling out/shouting.’
 (STA20200206)

The suffix *-ak* renders the argument structure of the verb *ṭànà* ‘call, address’ intransitive. The conceptual structure also transforms into a one-participant event structure. After derivation, it is still possible to express an addressee, i.e. a Goal participant towards which the act of calling is directed, in which case applicative morphology is required. The verb suffixed by *-ak* is then

⁷¹ The entry *ṭàlmàk* ‘move the tongue’ is included in this group since it refers to a manner of speaking and does not describe the action of moving one’s body part, as in ‘raise one’s arm’, for example.

(132) *céŋ-káyíràk-áá=dá* *ṭámáá* *Dùmùrík*
 IPFV3-speak-INS=1SG talk man-Tima
 ‘I speak Tima.’ (Theme)
 (06.04.09_19-07.wav)

(133) *Àhméd* *à-hìyánà* *Mìríám* *tónàk-íŋ=íí* (*ìì=ìhíná*)
 Ahmed PERF3-ask Miriam sing-VEN=DAT (DAT=they)
 ‘Ahmed asked Miriam to sing for them.’ (Beneficiary)
 (STH20190122_1)

As seen from the examples, in all three cases, the intransitive verbal stem has to be marked according to the thematic role of the following argument: the locative applicative strategy applies with a Goal; a Theme is introduced by means of the verbal instrumental marker, and a Beneficiary is licensed by the dative applicative. Additionally, Goal and Beneficiary participant arguments receive prepositional marking when the corresponding NPs are expressed overtly. As stated already, these arguments are not obligatory. Thus, the following sentence constitutes a well-formed proposition without an addressee argument:

(134) *kinee* *ŋkídríŋ* AWA *i-duuh-àk*
 sun early.morning 1PL-pray-MID/REFL
 ‘Let us pray early in the morning.’
 (08.04.09, 2_01-13.wav)

Verbs describing animal sounds, sounds related to bodily processes, and the manner of speaking most naturally only permit an unextended argument structure, e.g. *céŋŋwàràk* ‘(S)he is snoring’, *kìrìŋkíík cèntííràk* ‘The rooster is crowing.’.

Now that we have examined the syntactic patterns of these verbs, the details of their semantics shall be examined. Kemmer (1993: 20) identifies speech action verbs as being among other lexical classes of verbs occurring with middle markers across languages and notes that speech act verbs are among those middle-marked verbs that do not have corresponding underived counterparts, both within and across languages (Kemmer 1993: 22). Kazenin (2001: 923) makes a similar observation: “[D]eponents regularly occur in [...] the same semantic groups of verbs in non-related languages – most frequently, they are encountered among speech verbs, verbs of

translational motion, verbs of body care, and verbs of cognition.” Both Kemmer and Kazenin emphasize the tendency for speech actions to be expressed by lexicalized verbs across languages; at the same time, they highlight their relatedness to other verbs that belong to the middle conceptual domain. The middle semantics of verbs designating different kinds of sound emissions is linked to the conceptual structure of the corresponding events in that the event is conceptualized as a self-contained process within the sphere of the A participant. The syntactic reflection of this self-containment is the intransitive structure that accommodates the corresponding conceptual pattern.

Different lines of argumentation can be applied to different subgroups. The conceptualization of emotive speech actions as self-directed internal events, for example, can be linked to the fact that the content of praying, for example, does not need to be externalized, as in ‘to pray silently’. That is, there is no conceptualized expectation inherent to these verbs of an obligatory distinct referential entity as the endpoint of the action in terms of an effect resulting from the action. This lexicalized pathway can be restructured for communicative purposes through the applicative morphology that licenses the addition of an addressee participant, as was shown above with examples (131)-(133).

Verbs designating animal sounds (*báŋlák* ‘bark’ and *tírák* ‘growl, crow, rumble, roar’) and sounds related to bodily processes (*ŋwáràk* ‘snore’) and the manner of speaking (*tálwàk* ‘move the tongue and *tálwálwàk* ‘mispronounce’) can even be regarded as akin to body processes, in this case, related to articulatory organs. The event structure of the verbs of sound emission presupposes neither affected nor effected participants (the propagated sound can hardly be conceived of as a manifestation of an effected participant since it does not exist independently of the participant who produces this sound). That is, there is no distinct participant in the conceptual structure of the corresponding events. Rather, the conceptual structure implies just one core participant of which the action is predicated and, consequently, the constructions involving such verbs can reasonably be analyzed as one-participant middles; there is no endpoint lexicalized in the event structure of these verbs that is distinct from the initiator.

As with the preceding group of perception and cognition verbs (2.2.2.2), the verbs with *-ak* / *-ak* described in the present section seem to largely cover the semantic domain of sound emission. Two other verbs describing speech acts attested in the database are transitive verbs *dáh-í* (say-HT) ‘say it’ and *hìyànà* ‘ask someone/for something’. These verbs are used only transitively and cannot be detransitivized.

2.2.2.4 Body posture/ motion verbs.

The group of verbs designating body actions marked with the suffix *-ak* / *-ak* comprise such semantic subtypes as body posture and (manner of) motion verbs. That body posture /motion verbs are among the verb types occurring with middle morphology across languages is a well-established fact, most comprehensively articulated by Kemmer (1993).

The next table gives an overview of the body posture/ motion verbs marked with the suffix *-ak* / *-ak* in Tima attested so far.

Table 31. Body posture/ (manner of) motion verbs

Verb base	Gloss	Derived construction (TAM-ROOT-(EP)- MID/REFL-(INS))	English translation
<i>pìrì(t)</i> ⁷² -	flee, get free	<i>àm-pìrìt-l-ak</i> (telic) <i>àm-pìrì-y-ak</i> (atelic) <i>cém-pìrì-y-ak</i> (atelic)	3P (SG) has escaped 3P (PL) have escaped 3P (SG/PL) is/are fleeing
<i>rəbá-</i>	lean (on)	<i>à-rəbá-y-ak-áá</i> (telic) <i>à-rəbá-ak-áá</i> (atelic)	3P has leaned (on sthg./someone briefly) 3P (SG) has leaned (on sthg./someone for longer)/ 3P (PL) have leaned (on sthg./someone, briefly or for longer)
<i>dìrìhárηak</i> (lexicalized)	stagger	<i>cén-dìrìhárηak</i>	3P is staggering
<i>kòláhàk</i> (lexicalized)	go round/ circle	<i>céη-kòláhàk</i>	3P goes round

⁷² The element *t* is parenthesized since it occurs only with a singular subject, but not with a plural: *címí àmpìrìt-l-ak* ‘the goat escaped’, but *ímí àmpìrìy-ak* ‘goats escaped’. Interestingly, with the causative derivation, the same distinction holds; in this case, however, it is the number of the causee participant that determines the differing marking: *àm-pìrìt-l-ak címu* ‘3P has freed the goat’, *àm-pìrìy-ak ímí* ‘3P has/have freed goats.’

<i>kúràk</i> (lexicalized)	dance (a special kind of dance)	<i>céŋ-kúràk</i>	3P is dancing
<i>tùríwàk</i> (lexicalized)	wade	<i>cén-tùríwàk</i>	3P is wading

In Tima, the verbs with the suffix *-ak* / *-ak* belonging to the semantic class of body posture/motion are few in number (only six out of 392 verbs analyzed). The reasons for this are twofold. Firstly, due to their specific semantics, the verbs of motion, generally, and in Tima in particular, tend to be lexicalized as bare intransitives (see below). And secondly, in Tima, there is another mechanism to mark verbs of body posture/motion, namely by means of the derivational morphemes *-Vk* (see 3.3.5.2 below; as will be shown there, this strategy for marking body motion/posture verbs prevails in Tima). Indeed, we find verb pairs with a similar meaning, one marked with the (petrified) suffix *-ak* and another with the (mostly) productive suffix *-Vk*, e.g. *kòláhàk* ‘go round/ circle’ and *kìdálwùdálw-ùk* ‘circle, turn (of a fan)’. In this regard, it is remarkable that *-ak* / *-ak*-marked verbs from the same semantic domain are, for the most part, lexicalized verbs.

The lexicalized verbs do not have a corresponding underived counterpart. The verb *pìrìtùk/pìrìtùk* ‘flee, get free’, though not having an unmarked base form, allows the causative derivation whereby the causative suffix *-Vk* (see 3.2.2) is attached to the root instead of *-ak* (similar to the basic ingestive verbs (see 2.2.2.1), it represents what we, in keeping with Shibatani 2016, call precategorial verb roots):

- (135) *címì* *àm-pìrìtùk-àk*
 SG.goat PERF3-get.free-MID/REFL
 ‘The goat snatched free.’
 (STH20200203 6)

- (136) *wórísmáádèh* *àm-pìrìtùk-ík* *címì*
 SG.man PERF3-get.free-CAUS SG.goat
 ‘The man set the goat free.’
 (STH20200203 6)

There is no unmarked verbal base in the case of *róbá(y)àk* ‘lean (on sthg.)’ (expressing body posture) either. Yet it is not completely lexicalized; there exist two forms of the verb: *róbàk* is

used in atelic constructions, i.e. with plural participants or with imperfective morphology signaling that the event is ongoing; and *róbáyàk* is used in telic constructions, i.e. when the event is construed as timely bounded or punctual. What is special about *róbá(y)àk* ‘lean on’ is also that, in contrast to the rest of the verbs in Table 31, it has an underlying two-participant event structure; the Ground participant must be expressed overtly (unless it is recoverable from the context). To enter the argument structure, the Ground participant needs the verbal instrumental suffix *-aa*:

- (137) *trúúdel à-róbá-y-àk-áá ñ=háámìt*
 Trudel PERF3-lean-EP-MID/REFL-INS ERG=Hamid
 ‘Hamid leaned on Trudel (briefly)’
 (25.02.10_04_01.wav)

The remaining verbs in this small semantic subgroup have a one-participant event structure, the subject referring to an agentive participant being the sole obligatory argument. With the verb of translational motion *pìtíllàk* ‘flee, get free’, it is possible to add a Goal and a Source participant, for example:

- (138) *àm-pìtíllàk=yáy ì=kìyámò*
 PERF3-get.free-MID/REFL=LOC3P DIR=SG.enemy
 ‘(S)he has fled to the enemy.’
 (STH20190131_1)

The verbs *kòláhàk* ‘circle’, *kúràk* ‘dance (a special kind of dance)’, and *tùrúwàk* ‘wade’ lexicalize the manner of motion; with these verbs, it is possible to add a location argument that, as with the translational motion verbs, is optional:

- (139) *cìhòk=lì kòlahak atóʔaŋ u=kurtu*
 SG.bird=FOC circle above DIR=house
 ‘The bird is circling above the house.’
 (2011_06_28_07_01.wav)

Overall, the subgroup of verbs expressing body motion designates intrinsically one-participant middle events. That the body motion/posture verbs have a one-participant middle semantics is evidenced by the existence in other languages of bare intransitive verbs with similar meanings.

We find such pairs in Tima as well, e.g.: *kúrɔ̀k* ‘dance (a special dance)’ and *yóó* ‘dance’. Other verbs designating body motion (aside from one-participant middles marked with *-Vk*, to be discussed in 3.3.5.2) are the bare intransitives *dì* ‘walk, go’, *cí* ‘come’, *dàà* ‘run’, *dó/dó/dòwá* ‘stand’, *káám/íími* ‘leave’ (telic/atelic), *kàya* ‘swim’, *kàtù* ‘lie’, *tóó* ‘pass by’, and *yá* ‘go (repeatedly)’, i.e. nine lexemes as compared to seven marked with *-ak / -ak*.

2.2.2.5 Body care verbs

Two lexicalized verbs are attested that designate grooming or body care actions.

Table 32. *Body care verbs*

Verb base	Gloss	Verb form	English translation
<i>mùdúduwɔ̀k</i> (lexicalized)	rinse the mouth	<i>à-mùdúduwɔ̀k</i>	3P has rinsed the mouth
<i>ɲírɛ̀lɔ̀k</i> (lexicalized)	blow nose	<i>céɲ-ɲírɛ̀lɔ̀k</i>	3P blows nose

Earlier (2.2.1.2.1), we described a highly productive mechanism to express grooming/body care actions through transitive reflexive-possessive constructions whereby the affected body part takes a direct object argument position, and the suffix *-ak / -ak* establishes the possessive relationship between the A participant and the body part involved. The transitive construction, in this case, reflects the conceptual separability of A and the body part and, consequently, allows a situation to be construed where the corresponding action is carried out on a participant distinct from A (i.e. when the body (part) belongs to a participant other than A). The middle verbs presented here clearly express unitary actions not allowing the conceptual division of the initiator and the endpoint; the actions described can only be construed as one-participant events. Both verbs are more akin to verbs designating natural body processes in their semantic configuration (akin to *cough*, for example); such verbs necessarily express the conceptual conflation of the participant from which the action originates and the participant with which it culminates. Accordingly, this subgroup contains lexicalized forms that may reflect the high frequency of occurrence with the marker of conflation between the initiator and the endpoint (recall that reflexive-possessive verbs are all formed by productive derivational operations; there are no lexicalized forms in that group). The syntactic characteristics of the conceptual

outline of the verbs in Table 32 are that the verbs have an intransitive argument structure, with an agentive participant in the subject position being the sole core argument.

2.2.2.6 Verbs expressing spontaneous (internally caused) events

The next group comprises ten verbs subsumed under the heading ‘spontaneous events’, i.e. events that are conceptualized as internally caused. True to the label, the verbs in this subgroup have a patientive, i.e. non-instigating sole argument occupying the subject argument position. The following table shows the attested verbs denoting such spontaneous events in Tima.

Table 33. Spontaneous events (internally caused processes/states)

Verbal root	Gloss	Derived construction (TAM3-root-(EP)-MID/REFL)	English translation
<i>cáák</i> (lexicalized)	become	<i>àn-cáák</i> [nominal or adverbial complement] or	3P has become [nominal or adverbial complement]
<i>díyàk</i> (lexicalized)	be(come), relate	<i>cén-díyàk</i> [nominal or adverbial complement]	3P becomes/will become [nominal or adverbial complement]
<i>hślák</i> (lexicalized)	stay, remain	<i>à-hślák</i>	3P has stayed
<i>kàkíwàk</i> (lexicalized)	soak	<i>àη-kàkíwàk</i>	It soaked (moistened)
<i>kápàk</i> (lexicalized)	survive	<i>àη-kápàk</i>	3P survived
<i>lilyàk</i> (lexicalized)	infiltrate	<i>á-lilyàk</i> <i>ì=y-idl</i>	It has infiltrated the body
<i>káár-</i>	grow	<i>àη-káár-àk</i>	3P has grown
<i>mùnùnú-</i>	itch/scratch	<i>cé-mùnùnú-w-àk</i>	It itches
<i>ḡśdśh</i>	break open, hatch	<i>àn-ḡśdśh-àk</i>	It broke open

<i>tùlí</i>	leave, come out	<i>cén-tùlúlúw-àk</i> ⁷³	It appears (from underground)
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Remarkably, the verbs brought together here generally imply an inanimate subject participant; some individual entries allow animate participants as well, but not necessarily as a typical case. This fact sets the verbs presented in Table 33 apart from all the other subgroups of verbs extended with the suffix *-ak* / *-ak* discussed earlier. All the other groups have in common an animate, usually human subject participant as a salient characteristic feature. Spontaneous events, by contrast, are typically associated with the Patient (or Undergoer) role of the main participant, which is characterized by being non-instigating, non-volitional, and fully affected (while other semantic subtypes established in this section under the overarching term ‘middle’ exhibit the semantic components of instigation and volition in their feature specification of the main participant). That is, we may conclude that the main semantic load of the suffix *-ak* / *-ak* with spontaneous verbs is the sense of affectedness, whereas in other cases discussed earlier, aside from the notion of affectedness, the suffix indicates that the initiator (who is [+INST]) is simultaneously the entity that is affected by the action described by the verb. The concomitant difference is that spontaneous verbs marked with *-ak* / *-ak* can describe processes and states, while other verbs designate activities (since the feature [+state] is not compatible with the feature [+INST]).

Two verbs in Table 33, *cáák* and *díyáák*, with the meaning ‘become’, are, synchronically, highly grammaticalized items that cannot be used independently as free lexemes; they are employed in inchoative constructions that describe coming into a particular state. The following complementary distribution of usage holds between the two verbs: *àncáák* is used in

⁷³ The usage of *tùlí-* ‘leave’ with the derivational suffix *-ak* is unique to such natural phenomena as, e.g., the appearance of a plant from the ground when growing, or the emergence of water from underground:

íidí *cén-tùlúlú-w-àk-íj*
water IPFV3-leave:PLUR-EP-MID/REFL-VEN
‘The water is coming out (from underground).’

The partial root reduplication glossed as PLUR (pluractional) here expresses the durative (non-punctual) internal structure of the event (see 1.3.4.4 on pluractionality in Tima).

constructions that describe past events; *díyààk* is used in constructions expressing non-past (present and future) events:⁷⁴

- (140) *è-kálìk-áá cén-díyààk=à=ṭàṅ j̀=ìlìl*
 PST-rest-INS IPFV3-become=SOURCE=LOC3P INS=PL:cold
 ‘If it stays, it will be(come) cold.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

- (141) *àn-cáák à-y-àdú*
 PERF3-become STAT.SG-EP-ripe
 ‘It has become (somewhat) ripe.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

Dimmendaal and Schneider-Blum (in prep.: ch. “The Verb”) provide detailed information on the auxiliary usage of these verbs.

The lexicalized verb *h̀slàk* ‘stay’ is a partially grammaticalized lexical item that serves an auxiliary function in locative constructions and thus, similarly to *cáák* and *díyààk*, cannot be used independently but requires a locative complement:

- (142) *kàmb̀l̀à=lì h̀slàk y-ánṭí í=ìbí*
 camel=FOC.SG stay LOC-inside DIR=trees
 ‘There is a camel staying among the shrubs.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

With inanimate subjects, it is mostly used as an auxiliary verb to form locative constructions (but, of course, it is likewise possible with animate participants, as seen in (142) above). With animate subjects, besides its usage in locative constructions, *h̀slàk* can acquire the reading ‘stay’ or ‘live’, functioning as a regular verb:

- (143) *k̀s-h̀slàk-ó-d̀l̀l̀ṅ cén-díik-í-d̀l̀ k̀h̀ǹǹl̀ṅ*
 NEG-stay-EP-1SG:NEG IPFV1SG-walk-EP-1SG now
 ‘I cannot/don’t stay, I (have to) go immediately.’

⁷⁴ Besides the inchoative meaning expressed by *àndíyàk*, it can also be used in habitual/generic contexts and refer to states, such as, for example in *ṅ-kwáá=ná n-díyààk=íí=d̀l̀* ‘He is in a brotherly relation to me.’

The usage of *hólàk* demonstrated above might bring into question its inclusion in the spontaneous group, since in these constructions, there is an entailment of a conscious deliberation on the part of the main participant that does not quite fit the description ‘internally caused’. Nevertheless, the general meaning of *hólàk*, allowing its wide usage with inanimate participants, which stipulates its interpretation as a passive undergoer, is taken here as a criterion for its inclusion in the spontaneous group.

Most of the remaining verbs with the suffix *-ak /-ak* (productively added or as a petrified element of the lexeme) are compatible exclusively with inanimate subjects: *kàkúwàk* ‘soak’, *mùnùnúw-àk* ‘itch’, *ṭṣdṣh-àk* ‘break open (of eggs)’, *lilyàk* ‘infiltrate’, and *tùlùlú-w-àk* ‘come out, appear’. The nature of the event designated by *kápàk* ‘survive’ favors animate subject participants. And the verb *káár-àk* ‘grow’ is available for participants whose referents undergo this developmental biological process by nature, i.e. animate beings, plants, and other organic entities.

The non-lexicalized verbs *káár-àk* ‘grow’, *mùnùnú-w-àk* ‘itch’, *ṭṣdṣh-àk* ‘break open’, and *tùlùlú-w-àk* ‘come out’ participate in causative alternations. The causative alternation is to be expected with these verbs since, as defined for this subgroup, they have patientive subjects, and a patientive causee is one of the crucial determinants of the verb’s availability for morphological causativization (see 3.2.2):

Table 34. Inchoative-causative alternations

P V-MID/REFL (intransitive structure)	Gloss	A V-(CAUS) P (transitive structure)	Gloss
<i>àṅ-káár-àk</i>	3P has grown	<i>àṅ-káár-ṣk</i>	3P has grown it
<i>cé-mùnùnú-w-àk</i>	it itches	<i>cé-mùnùnú-ùk</i>	it makes 3P scratch her(him)self
<i>àn-ṭṣdṣh-àk</i>	it broke open	<i>àn-ṭṣdṣh</i>	3P broke it open
<i>cén-tùlùlúw-àk</i>	it appears (from underground)	<i>àn-tùlì-y-ik</i>	3P left 3P out

transitive counterpart and where it is possible to construe a corresponding event involving two physically and conceptually distinct participants.

Yet, similar to the reflexive group, one-participant middles describe states of affairs where the main participant is agentive (the spontaneous group is a remarkable exception here) and animate (usually human), who is acting volitionally to attain an effect from the designated action. At the same time, this main participant represents an affected entity due to the fact that the result of the action accumulates with the initiator (or, as is the case with body motion/posture and sound emission verbs, there is no outward transfer of energy whatsoever).

Now we turn to the next group of verbs that use the suffix *-ak* / *-ak*: verbs that construe reciprocal predicates that likewise show resemblances with the reflexive verbs and yet differ from them in some important respects.

2.3 The reciprocal function of the suffix *-ak / -ak*

2.3.1 Introductory notes

A prototypical reciprocal construction expresses a situation type with minimally two participants where the action described by the verb is mutually performed by these event participants. The mutual performance of identical actions implies the participants' equal status in terms of thematic roles. Lichtenberk (1985: 21) describes reciprocal constructions as situations with two participants, A and B, "where the relation in which A stands to B is the same as that in which B stands to A (e.g. A and B hit each other)". The next Tima sentence can serve as an example of a prototypical reciprocal situation:

- (145) *Àlì ná Wáliíd àn-táán-àk*
Ali CONJ Waleed PERF3-beat-REC
'Ali and Waleed have beaten each other.'
(STH20200203 5)

In the Tima sentence above, the equivalent of the English 'each other' is expressed through the derivational suffix *-ak*, here bearing reciprocal meaning. The result of the reciprocal derivation is that the sentence acquires an intransitive syntactic structure; i.e. the suffix *-ak / -ak* has a detransitivizing effect.

In reciprocal constructions, the thematic roles are mapped on participant arguments in quite a complex way. The two participants each bear both the agent (or initiator) and the patient (or endpoint) role.⁷⁵ Implicated in the above definition, reciprocal derivations, as a rule, have as their bases two-place (or two-participant) verbs that contain these two roles in their conceptual structure: the agent and the patient. An essential semantic constraint implied by such a definition is that the base verbs have to subcategorize for thematic roles so that both participants can equally perform both roles. Reciprocal predicates, thus, can be termed symmetrical, i.e. the proposition *X and Y V(erb)ed each other* can be decomposed into *X Ved Y* and *Y Ved X* without

⁷⁵ Maslova (2007: 336) proposes a somewhat different interpretation of a reciprocal construction, namely as one that encodes "the reciprocal participants as a single whole." That is, the focus of a reciprocal construction is on the role identity between the participants (i.e. their identical participation in the event, resulting in conceptualization of the event as a single event), rather than on the simultaneous exhibition of two roles (A and P) by each participant.

compromising the truth-conditional value of the original reciprocal one-clause sentence. This qualification excludes certain groups of verbs from reciprocal derivation, e.g. those that entail a P argument lower on the animacy hierarchy (for instance, effected object verbs like *build*, *write*, etc., ‘effected object’ meaning an entity created as a result of the activity denoted by the verb). On the other hand, this semantic restriction also serves as an interpretation selector in the case of multifunctionality of the derivative element involved. Thus, the Tima sentence *ìwòrmáádǎh-ǎ=ná cén-túyù-w-àk* (men IPFV3-thresh-EP-ÀK) ‘The men are threshing’ cannot be interpreted as ‘The men are threshing each other’; here, the suffix *-àk* receives an antipassive reading due to the basic asymmetry of the underlying argument roles of the base verb *túyù* ‘to thresh’ (see section 2.4 on the antipassive function of the suffix *-àk / -ak*).

Besides the prototypical cases of reciprocal situations, some other extended uses of reciprocal meaning are often expressed by the same marking, for example, so-called ‘chaining events’⁷⁶ (Lichtenberk 1985: 24-6). The next Tima example serves as an illustration of a chaining event:

- (146) *ihíná à-léélǎ-àk*
 PRON3PL PERF3-follow-REC
 ‘They followed each other.’
 (2011_06_28_11_25.wav)

In this case, the roles are converse in that the proposition “A follows B” does not equal “B follows A”; the relation is converse – “B precedes A”. Still, there is an implication of a spatial or temporal relation of mutual entailment between the participants. This implication yields a conceptual similarity between the reciprocal proper and the chaining events that account for their identical coding. The plurality of relations inherent to both situation types might be regarded as a connecting link.

Reciprocal situations naturally presuppose participant plurality and, consequently, the plurality of actions. Linguistically, this plurality is reflected in the choice of verbal roots: with verbs for which pluractional root forms are available (see 1.3.4.4 on pluractionality in Tima), these pluractional roots are required to form morphological reciprocals (see below).

With regard to the functional domain, the semantic specification of the plurality of relations is considered here as a possible conceptual link to two other functions of the suffix *-àk / -ak*, the

⁷⁶ For other extended uses from a typological perspective, not immediately relevant for the current analysis, see Nedjalkov (2007b) and Evans (2008).

antipassive (see 2.4 below), and its function as an atelicity marker expressing such notions as iterativity, durativity, and habitability (see 2.4.5).

The next section looks at ways of expressing reciprocal situations in Tima.

2.3.2 The morphosyntactic coding of reciprocal situations

Languages deal in different ways with the conceptual complexity of reciprocal situations depending on their morphosyntactic possibilities. Generally, the distinction between two main strategies is observed: a) the encoding of reciprocal events by means of an intransitive structure, and b) maintaining the two-participant argument structure of the base verb (see Evans et al. (2007) for interesting mixed strategies in Australian languages that deviate from this straightforward dichotomy). Many languages use both strategies with different degrees of overlap. In the intransitivizing case, a synthetic (or morphological)⁷⁷ mechanism is at play, whereas the second case – when the underlying two-place structure is retained – employs an analytic (or syntactic) pattern. Tima, like many other languages, utilizes both of these strategies to express reciprocal events. They can be used interchangeably with certain verbs; however, the relation of interchangeability is not bi-directional. While all morphological reciprocals can easily be replaced with a periphrastic (analytic) variant, the reverse does not hold; that is, in contrast to the morphological strategy, the periphrastic pattern shows much higher productivity, allowing reciprocals to be formed with different verbs without any semantic restrictions (see 2.3.4).

The morphological strategy is to add the suffix *-ak / -ak* to the underlying two-participant verb, rendering the resultant argument structure intransitive. The analytic strategy employs the free lexeme *ἰωάνλη* ‘each other’, which serves as a reciprocal pronoun without any change in the verbal argument structure (see 2.3.4 below).

⁷⁷ Note that some authors use the term ‘lexical’ in cases that are subsumed here under morphological marking (affixation in the case of Tima), e.g. Behrens (2007). The motivation for this choice is that the morphological elements also bear significant lexical meaning, so that the reciprocal meaning of a derived verb is composed of the lexical content of both the verbal root and the bound morpheme. In the present analysis, however, the term ‘lexical’ is used for underived forms.

First, the affixal derivation will be examined in an attempt to determine the key semantic features of the underlying verbs that account for their eligibility for reciprocal derivation.

2.3.3 Morphological reciprocals

The morphological derivation of reciprocal constructions in Tima is encoded by the multifunctional suffix *-ak / -ak*. Similar to reflexives (2.2.1), reciprocals are derived from bivalent verbs, as in both construction types, reciprocals and reflexives, participants are each assigned two roles – the initiator and the endpoint (see Kemmer 1993: 98). The next example demonstrates the reciprocal derivation (ex. (147)) from a base bivalent verb (ex. (148)) in Tima:

- (147) *ìbàrímbárí céŋ-kúríh-àk*
children IPFV3-push:PLUR-REC
'The children are pushing/push each other.'
(STH20200203 5)

- (148) *cídá kòó céŋ-kúríh càntàà*
someone IPFV-push:PLUR SG.bag
'Someone is pushing/pushes the bag.'
(ST20190128 2)

Example (147) is an intransitive construction with one core argument, a plural noun phrase, occupying the subject position. The suffix *-ak* indicates that the action expressed by the verb is directed toward the participants in the subject position. The implication of the reciprocal situation described is that each participant is at the same time someone who pushes (agent) and someone being pushed (patient). Yet, on the surface, only the agent role is expressed. The patient role, in contrast, is suppressed, resulting in an intransitive structure. That is, in reciprocal constructions, the agentive component takes over, and the derived constructions can be described as agent-preserving (and also subject-preserving due to the nominative-accusative alignment), a semantic feature shared with the other two valency-related functions expressed by the suffix *-ak / -ak*: the middle-reflexive (2.2) and the antipassive (2.4).

The reciprocal derivation is only moderately productive in Tima, judging by the relatively low number of verb bases attested with the reciprocal derivation (20 out of 392). The tables below present the attested cases of morphological reciprocals. As in the case of the morphological reflexive constructions (2.2.1), the morphological reciprocal reciprocals fall into direct (Table 35) and indirect constructions (Table 36).

Table 35. Direct morphological reciprocal constructions

Verb base	Gloss	Reciprocal construction (TAM3-root-(ep)-REC)	English translation
a) lexicalized reciprocals (natural reciprocal events)			
<i>càkàlàk</i>	quarrel	<i>àn-càkàlàk</i>	they quarreled with each other
<i>tìmàk</i>	wrestle	<i>àn-tìmàk</i>	they wrestled
<i>tòntwàk</i>	be equal	<i>àn-tòntwàk</i>	they agreed
b) reciprocals with reciprocal specifiers <i>idà/ idék</i> (lit. bodies/necks)			
<i>kóné</i>	help, prevent, protect	<i>àη-kóná-y-àk (idà/ idék)</i> ⁷⁸	they helped each other
<i>ṭól-</i>	agree, come together	<i>àn-ṭólí-y-àk (idà/ idék)</i>	they agreed/came together
<i>kóyó</i>	make	<i>àη-kóyàk-ááàη idà</i> (idiom. exp.)	they relied on each other
<i>kùmún</i>	find, see	<i>àη-kùmún-àk idà/ idék</i>	they met together
<i>kótí or kótóyàk</i> ⁷⁹	take	<i>àη-kótóy-àk idà/ idék</i> (idiom. exp.)	they hate each other
<i>túlún</i>	visit	<i>àn-túlún-àk-áá idà/ idék</i>	they met together
c) reciprocals without reciprocal specifiers (adding reciprocal marking unacceptable)			
<i>kódó</i>	accept, marry	<i>àη-kódó-w-àk</i>	they are married

⁷⁸ The parenthesized *idà/idék* indicates that these nominals are optional in reciprocal constructions.

⁷⁹As already explained in the section on the reflexive function, with regard to this verb form, two possible explanations can be considered: either the verb contains an irregular epenthetic element *-ɾ-*, in which case the base verb might be *kótí* ‘take’, or the form *kótóyàk* is a lexicalized verb.

is attributable to the principle of economy, according to which the morphosyntactic encoding correlates with the degree of predictability.

Other reciprocal derivatives in Table 35 have underlying two-place base verbs, usually with a semantically corresponding meaning. In three cases, though, the semantic relation between the base and the derived construction is not entirely transparent. First, the idiomatic expression *ànkóṭàkáátàṅ idà* ‘They relied on each other’ employs the verb *kóyó* ‘to make’, whose meaning is not directly recoverable from the idiom itself. The expression *àṅkódówàk* ‘They are/have married’ has as its base the verb *kódó*, with the meanings ‘to take’, ‘to accept’, ‘to hold’, and ‘to marry’. Yet, when extended by the suffix *-ak*, it can only mean ‘be married’. So, in this case, only one meaning from the whole semantic range has been lexicalized as a reciprocal verb. And lastly, *àṅkótóràk idà* ‘they hate each other’ can be assumed to go back to the base *kótí* ‘to take’ (or, otherwise, to the lexicalized verb *kótóràk* ‘take for oneself’ (see 2.2.1.2.2)) that receives the idiosyncratic meaning ‘to hate each other’ when extended by the suffix *-ak* and the reciprocal specifier *idà/ idék* ‘bodies/ necks’ (the reciprocal specifiers are explained below).

In direct reciprocals (Table 35), as the name suggests, the relationship between participants of the event described by the verb is direct, i.e. the reciprocants are affected by the event directly. Syntactically, this direct relationship is reflected in the argument structure, which consists solely of a subject and a predicate, e.g.:

- (149) *(ihìnà) àn-táán-àk*
 PRON3PL PERF3-beat-REC
 ‘They have beaten each other.’
 (STH20200203 5)

Indirect reciprocals (Table 36), true to the label, imply an indirect relation between the reciprocants (see 2.3.3.4 below for explanation and examples).

In the subgroup of direct reciprocals, two morphosyntactic patterns can be observed: i) reciprocal constructions with a reciprocal specifier *idà/ idék* (lit. ‘bodies’/ ‘necks’), which I will call ‘heavy reciprocals’, analogically to the reflexive constructions exhibiting a similar pattern (see 2.2.1.1 above), and ii) constructions without the reciprocal specifiers, where the adding of *idà/ idék* is unacceptable, which I will call ‘light reciprocals’. In their usage as reciprocal specifiers, *idà* ‘bodies’ and *idék* ‘necks’ can be used interchangeably without any change in

meaning. Within the ‘heavy’ subgroup, they are optional with some verbs and obligatory with others (the elaboration follows below).

Before proceeding to the individual subgroups established in Table 35 and Table 36, a couple of words are in order on the nature of the reciprocal subject. The reciprocal subject can be simple, i.e. expressed through a single plural NP⁸² or two conjoined NPs (*X na* ‘with/and’ *Y*), on the one hand, or discontinuous – when the second participant flagged with the conjunction *na* ‘with’ is placed postverbally (*X VerbREC na Y*) – on the other. The next three examples demonstrate these three possibilities:

1) Simple plural reciprocal subject

- (150) *ihìnà àn-táán-àk*
 PRON3PL PERF3-beat-REC
 ‘They have beaten each other.’
 (22.09.07-128.wav)

2) Simple conjoined reciprocal subject

- (151) *Háámìt nà Ìbráhím àn-táán-àk*
 Hamid CONJ Ibrahim PERF3-beat-REC
 ‘Hamid and Ibrahim have beaten each other.’
 (STH20200203 5)

3) Discontinuous reciprocal subject

- (152) *Háámìt àn-táán-àk nà Ìbráhím*
 Hamid PERF3-beat-REC CONJ Ibrahim
 ‘Hamid and Ibrahim have beaten each other.’
 (STH20200203 5)

⁸² However, it is also possible for some verbs to express a reciprocal situation and have a singular subject argument, as is the case with the verb ‘to marry’: *Ibrahim àṅkódówàk* ‘Ibrahim is married.’ The reflexive reading is obviously ruled out. See Behrens (2007) for a lengthy discussion of singular subjects in reciprocal constructions in various languages.

In discontinuous reciprocals (ex. (152)), the second part of the reciprocal subject moves into the postverbal syntactic position; the conjunction *na* ‘and/with’ indicates its status as a part of a discontinuous argument. In contrast to (non-obligatory) adjuncts introduced by a comitative preposition, the reciprocal arguments so expressed cannot be freely omitted. Even though the reciprocal co-participant is coded through a prepositional phrase, the symmetrical relationship between the two arguments is not compromised by this encoding pattern. An easy test for the subjecthood of the postverbal participant would be to replace both NPs with the 3rd person plural pronoun *ihìnλ* ‘they’ (X VerbREC na Y = *ihìnλ* VerbREC). That is, even with two overt participant NPs there is only one argument slot available for them, that of the subject. The discontinuous subject is only possible with morphological reciprocals (with all subgroups presented in Table 35 and Table 36). Periphrastic reciprocals do not allow discontinuous subject construction (see 2.3.4).

2.3.3.1 ‘Heavy’ morphological reciprocals (augmented with the lexeme *ìdλ/ìdék*)

The reciprocal constructions in this subgroup are complex, or compound, consisting of two elements: the derivational suffix *-ak / -ak* and the reciprocal specifier *ìdλ/ìdék*, repeated here for convenience:

Table 37. ‘Heavy’ morphological reciprocals

Reciprocal construction	English translation
<i>àηκόνàyàk</i> (<i>ìdλ/ìdék</i>)	they help each other
<i>àητζόλίγàk</i> (<i>ìdλ/ìdék</i>)	they agreed/came together
<i>àηκόττὰκάάττὰη ìdλ</i> (idiomatic expression)	they relied on each other
<i>àηκὺμὺνàk ìdλ/ìdék</i>	they met together
<i>àηκότηράk ìdλ/ìdék</i> (idiom. exp.)	they hate each other
<i>àητὺλὺνàkàá ìdλ/ìdék</i>	they met together

The reciprocal specifier is obligatory with some verbs, according to the Tima speakers consulted, and optional with others (parenthesized *ìdλ/ìdék* ‘bodies’ / ‘necks’), although a preferred pattern is always to add it into the reciprocal construction (see below). The term

‘specifier’ is used here following the definition given by Nedjalkov (2007b:164), according to which “[r]eciprocal specifiers are words [...] that cannot be used to encode reciprocity on their own. They co-occur with grammatical [...] reciprocals either for emphasis or for disambiguation.” This definition fits with what we find in Tima: the specifiers *idà/idék* ‘bodies’ /‘necks’ express reciprocal meaning only when used simultaneously with the suffix *-ak / -ak* and not on their own. That is, the reciprocal construction in (153) below would be ungrammatical without the suffix *-ak*:

(153) *àŋ-kùmún-àk* *idà*
 PERF3-see/find-REC bodies
 ‘They met together.’
 (STH20190131 1)

**àŋ-kumun* *idà*⁸³
 PERF3-see/find bodies

Originally, *idà* (sg. *cidà*) ‘bodies’ and *idék* (sg. *kidék*) ‘necks’ are full-fledged nouns. As already mentioned in section 2.2.1 on the reflexive function of the suffix *-ak / -ak*, in many African languages, nouns with the meaning ‘body’ frequently grammaticalize into markers of reflexivity and reciprocity (Heine 2000: 10). When used as grammatical markers of reciprocity in constructions with derived verbs, *idà/idék* lose their nominal referential properties. Concomitant with this, the morphosyntactic manipulation of these words is highly restricted with reciprocal constructions. Naturally, only the plural form is compatible with the construal of the reciprocal event, since minimally two parties are involved. Further, *idà/idék* cannot take any prepositions or modifiers as would be possible with regular nouns (in contrast to the reciprocal pronoun *iwán/àŋ* ‘each other’ used in periphrastic (i.e. analytic) reciprocals (see 2.3.4 below)). And finally, when *idà/idék* are used as grammatical markers of reciprocity, their syntactic position is fixed. They can only appear postverbally (without acquiring the properties of a direct object) and cannot move into the sentence-initial position (which is possible with regular noun phrases serving as predicate arguments).

⁸³ It would be acceptable when the intended meaning was ‘They found bodies’, where ‘bodies’ bears a literal meaning.

As indicated by parantheses in Table 37, adding a specifier (*idλ* or *idék*) can be optional in some attested constructions. However, the Tima speakers who provided the example sentences always preferred to insert *idλ* or *idék* with reciprocal predicates. According to the speakers, “it sounds better” with *idλ* (or *idék*) even if the suffix alone is sufficient for transmitting the sense of reciprocity. Also, when speaking fast, the speakers spontaneously produce sentences with *idλ idék* with verbs that allegedly do not require them. In any case, a decisive factor as to whether to add the specifier in these optional cases (*kónáyàk (idλ)* ‘help each other’ and *ḡólíyàk (idλ)* ‘agree’) is how the reciprocants are expressed syntactically. With these two constructions, a reciprocal specifier is obligatory with a discontinuous reciprocal subject where the second participant occurs postverbally and is introduced by the comitative/conjunctive preposition *na*:

- (154) *wáyén àn-ḡólí-y-àk idλ nà cíbá*
 SG.father PERF3-agree-EP-REC PL.body CONJ SG.child
 ‘The father and the child agreed.’
 (STH20190122 1)

Leaving out of the reciprocal specifier in the construction in (154) is prohibited (**wáyén ànḡólíyàk nà cíbá*), whereas it is possible when both reciprocants occupy the sentence-initial position: *wáyén nà cíbá ànḡólíyàk*.

Assumedly, with the discontinuous subject in (154), the specifier *idλ* helps to define the syntactic status of the postverbal argument as a part of the subject NP. So, in (154), the two participants in the reciprocal event have different syntactic statuses: the first constituent *wáyén* ‘father’ occupies the subject argument position (i.e. the unmarked preverbal position), and the second constituent *cíbá* ‘child’ is a postverbal argument introduced by the comitative preposition *na* ‘with’. Both participants are singular NPs, yet the reciprocal specifier *idλ* has a plural form and serves as a kind of anaphoric control mechanism signaling a plural subject. That is, the discourse or pragmatic prominence associated with the clause-initial participant does not compromise the equal semantic status of the postverbal participant and the participant in the subject position. The two constituents can be put in reverse syntactic positions without any change in the truth-conditional value of the original proposition.

The expressions *àḡkótáàkáá idλ* ‘to rely on each other’ and *àḡkótóḡàk idλ* ‘to hate each other’ do not allow the reciprocal specifiers to be omitted since they have an idiomatic status, and idiomatic expressions always have a rigid form, not allowing any constitutive part to be left out.

The verbal reciprocals based on the verbs *kùmún* ‘to see, find’ and *tulun* ‘to visit’ require supplementing with *idá /idek* as well, regardless of the subject configuration (simple or discontinuous), e.g.:

- (155) *ihíná àŋ-kùmún-àk idék í=kíhí=yáá mórñ-èk-áá*
 PRON3PL PERF3-see-REC PL.neck DIR=place=DEM.DIST divide-MID.ATEL-INS
 ‘They met where the road divides.’
 (STH20190131 1)

It is not possible to say **ihíná àŋkùmúnàk íkíhíyáá mórñèkáá*, i.e. without the reciprocal specifier. Here, one possible reason is the disambiguation of different readings associated with the verbs *kùmún* and *túlún*. Both *kùmún* and *túlún* suffixed by *-ak* may be used in other constructions without reciprocal meaning. Recall from the discussion on the middle function of the suffix *-ak / -ak* (see 2.2.2.2) that *kùmúnàk* used on its own receives an idiosyncratic reading ‘to recognize, to remember’:

- (156) *wòrtùmáádóh àŋ-kùmún-àk=à=táŋ kìcìmbárí*
 SG.man PERF3-see/find-MID/REFL=SOURCE=LOC3P SG.child
 ‘The man knows/ has recognized the child.’
 (STA20200212 1)

In (156), the same verb form is used, i.e. the root *kùmún*, suffixed by *-ak*. Yet in this case, another meaning is expressed due to the participant NPs being coded differently: the second participant, *kìcìmbárí* ‘child’ is to be interpreted as a P-argument in a postverbal position without the comitative marker. The morpheme *-ak*, consequently, does not actualize a reciprocal meaning due to the unequal status of the participants in terms of their semantic roles: reversing the positions of *wáyén* and *cíbá* would compromise the truth-conditional value of the original sentence. Note also that it is not possible to construct the reciprocal situation ‘to recognize each other’ by means of the verbal derivation; *kùmúnàk idá* can only mean ‘to meet/see each other’. Likewise, *túlúnàk* can be used in a non-reciprocal construction. Compare the next two sentences:

- (157) *Háámìt àn-túlún-àk-áá Ìbràhìm*
 Hamid PERF3-visit-MID/REFL-INS Ibrahim
 ‘Hamid met/visited Ibrahim’ (‘Hamid’ construed as an initiator of the meeting)

(STH20200203 6)

- (158) *Háámìt àn-túlún-àk idà nà Ìbràhìm*
Hamid PERF3-visit-MID/REFL PL.body CONJ Ibrahim
‘Hamid and Ibrahim met together’.

(STH20200203 6)

In (157), the event of visiting is construed as having one major instigating participant (Hamid). The instrumental suffix *-aa* introduces the second participant (Ibrahim) as a patient-like argument with a comitative role (see section 1.3.4.3.3 on the verbal instrumental marker), not as part of a discontinuous reciprocal subject. In (158), by contrast, the two participants are encoded as a discontinuous subject NP (as explained above): *idà* serves as an (obligatory) anaphoric control tool indicating that the predicate has a plural subject. The inference of this construction is that both participants are equally involved in the instigating of the meeting event (a characteristic feature of a reciprocal construction).

2.3.3.2 Semantic properties of the ‘heavy’ reciprocal constructions

The most obvious shared semantic feature of the ‘heavy’ group, on the whole, is a low degree of affectedness of the P argument of the base two-participant verb. Consider the verb *túlún* ‘to visit’, for example. The P participant of a visiting event can hardly be seen as being affected by it (possible eating up of food supplies notwithstanding). Likewise, the verbs *kùmún* ‘see, find’, *kóné* ‘help’, and *ǵól-* ‘agree, come together’ also imply a low degree of affectedness of their P participants. Indeed, all these verbs have in common a restriction on the morphosyntactic construal of corresponding two-participant events that seem to correlate with the low affectedness of P. Thus, the semantic feature value [-AFF] of the P argument implied by the lexical meaning of the base verbs precludes the construal of highly transitive predicates employing the transitivity marker *-i / -I* with these verb bases (the verbs used in idiomatic expressions are excluded from this generalization). Recall that the attachment of the high transitivity marker renders the conceptualization of the event as telic and P as fully affected (see section 1.3.4.3.1 on the transitivity marker). For convenience of reference, the P encoding

with the base two-participant verbs is summarized in Table 38 (excluding the idiomatic expressions):

Table 38. Reciprocal constructions and corresponding transitive constructions

Reciprocal construction (PERF3.root.REC)	English translation	Two-participant construction	English translation
<i>àḡkónáyàk</i> (ìdà/ìdék)	they help each other	<i>àḡ-kóné=ṭáḡ</i> ì=ḡínà PERF3-help/prevent =LOC3P DAT=PRON3SG	3P has helped 3P
<i>àḡṭólíyàk</i> (ìdà/ìdék)	they agreed/came together	<i>àḡ-ṭól-òl=yàḡ</i> ì=ḡínà PERF3-agree-MID=LOC3P DIR= PRON3SG	3P has agreed/forgiven 3P
<i>àḡkùmúnàk</i> ìdà/ìdék	they met together	<i>àḡ-kùmún</i> ḡínà PERF3-see/find PRON3SG	3P has seen/found 3P
<i>àḡtúlúnàk</i> áá ìdà/ìdék	they met together	<i>àḡ-túlún</i> ḡínà PERF3-visit PRON3SG	3P has visited 3P

As seen from the representation above, none of the base verbs employs the transitivity marker *-i / -I* in the construal of two participant events. *Kóné* ‘help, prevent’ and *ṭól-* ‘agree’ need a locative marking on the verb to add the second participant. *Kùmún* ‘see, find’ and *túlún* ‘visit’ do not employ any marking at all; with them, it is the intrinsic lexical meaning that precludes the construal of highly transitive events with an affected P participant. That is, since the semantic profile of the second participant deviates in its feature values from a prototypical Patient, the morphosyntactic coding of the corresponding two-participant event may also deviate from the transitive pattern (proto)typical for Tima, i.e. verb + transitivity marker *-i / -I* followed by an unmarked argument (see 1.3.2). The construal of a two-participant event with the verb *kóné-* ‘to help’ shall illustrate the point:

- (159) *àn-tà̀nà* *Hà̀àmìt* *mò-kóné=̀táj* *ìì=wá̀rtókólò̀j*
 PERF3-call Hamid OPT-help=LOC3P DAT=SG.chief
 ‘(S)he called Hamid to help the chief.’
 (STA20200211 1)

The verb *kóné* ‘help’ is extended by the locative applicative morpheme *=̀táj* in order to introduce the second participant into the argument structure. The second participant is flagged with a preposition indicating its thematic role: in two- or three-participant predicates, the argument introduced by the locative applicative bears either the Recipient/Goal participant role with the directive marker *i= /ɪ=*, or the Beneficiary role marked by the preposition *ii= /ɪɪ=*, as in (159).

The ‘light’ subgroup (which disallows reciprocal specifiers) shows some remarkable differences from the ‘heavy’ group with regard to the above observations.

2.3.3.3 ‘Light’ morphological reciprocals

In this subgroup, the reciprocal meaning is conveyed solely by the suffix *-ak / -ak* attached to the verb root; the addition of a reciprocal specifier would be ungrammatical. For ease of reference, the verbs are repeated below in Table 39.

Table 39. ‘Light’ morphological reciprocals

Reciprocal construction (TAM3P.root.REC)	English translation
<i>à̀nkódówà̀k</i>	they are married
<i>cé̀jkhà̀hà̀k</i>	they are pushing each other
<i>à̀jkwókówà̀k</i>	they hold each other
<i>à̀lè̀l̀t̀à̀k</i>	they followed each other
<i>cémú̀ù̀nà̀k</i>	they insult each other
<i>à̀róbó̀yà̀k</i>	they bumped into each other
<i>à̀ntá̀ánà̀k</i>	they beat each other

<i>cénṭùyúṭàk</i>	they are pulling each other (of two teams)
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The next example serves as an illustration of a ‘light’ morphological reciprocal construction:

- (160) *íwórmàádèh=ná cé-mùùn-àk*
 PL.man=DEM.PROX IPFV3-insult:PLUR-REC
 ‘The men insult each other.’
 (STH20200203 5)

Most of the verbs in this subgroup designate mutually performed physical contact: *kùrùhàk* ‘push each other’, *kwòkwààk* ‘hold each other’, *ròbòyàk* ‘bump into each other’, *táánàk* ‘beat each other’, *ṭùyúṭàk* ‘pull each other’. The verb *mùùnàk* ‘insult each other’ can be considered as a verb expressing an emotional contact situation. The chaining-event verb *léélṭàk* ‘follow each other’ is included in this subgroup as well. Here, the close spatial-temporal relation between the participants is conceptually similar to physical contact.

As noted above, the base verbs of the reciprocal derivatives in this subgroup differ from the ‘heavy’ reciprocals in terms of both the semantic entailments of the verb bases and their concomitant morphosyntactic behavior. Semantically, the underived two-participant verbs of this group imply a more prototypical patient as a second argument, i.e. a P-participant specified for the feature values [+AFF, -VOL, -INST] (see 1.2.2.3 for the feature-based approach to thematic roles adopted in the present study).

The entailment of a more prototypical P participant of these bases correlates with the possibility of forming highly transitive constructions with the base verbs by adding the telicity/transitivity suffix *-i / -l* (and its allomorphs). The latter operation prompts the interpretation of the P participant as fully affected (see 1.3.4.3.1). Excluded from this generalization are the verbs with inherent atelic lexical aspect *táán* ‘to beat (repeated action)’ and *ṭùyú* ‘to drag’ (durative), which cannot take the telicity marker (but which still imply an affected P participant). Table 40 presents the alternations described (note that with some verbs, the transitivity marker assimilates to the preceding root vowel):

Table 40. ‘Light’ reciprocals – telic/transitive alternations

Reciprocal verb (TAM-root-(EP)- REC)	English translation	Telic/transitive construction (PERF3-root-HT)	English translation

<i>àḡ-kódów-àk</i>	they are married	<i>àḡ-kódó-ó Mariam</i>	3P married Mariam
<i>céḡ-kùrùh-àk</i>	they are pushing/ push each other	<i>àḡ-kùrh-í cíbá</i>	3P pushed the child
<i>àḡ-kwókwa-àk</i>	they hold each other	<i>àḡ-kwé-é kárbááná</i>	3P held the baby
<i>à-lèèlḡ-àk</i>	they followed each other	<i>à-làl-á wòḡḡmáádóh</i>	3P followed the man
<i>cé-múùn-àk</i>	they insult each other	<i>à-mùn-í pínà</i>	3P insulted him/her
<i>a-róbó-y-àk</i>	they bumped into each other	<i>à-róbó-y-í iwà</i>	3P joined the ropes
<i>àn-táán-àk</i>	they beat each other	<i>àn-táán cíbá</i>	3P beat the child
<i>cén-tùyú-àk</i>	they are pulling each other (of two teams)	<i>cén-tùyú kwàná</i>	3P is dragging a cow (e.g. with a rope)

Another peculiarity of this ‘light’ subgroup pertains to verbs with alternative pluractional roots (see section 1.3.4.4 on verbal pluractionality in Tima). In Table 35 at the beginning of this chapter, these alternative roots are given following the slash sign after the corresponding non-pluractional roots. As a matter of fact, most verbs participating in the ‘light’ reciprocal derivation have a pluractional counterpart or, with some verbs, an inherent atelic lexical meaning like *táán* ‘to beat’ and *tùyú* ‘to drag’ (the verbs in the ‘heavy’ group do not have pluractional roots; see Table 37). Only the pluractional alternatives are eligible for the reciprocal derivation; the derivation from existing non-pluractional roots is ruled out. Likewise, with the verbs that have suppletive roots for telic (single action) and atelic events, it is always the atelic counterpart that is used in the reciprocal derivation. Consider the verb *táán* ‘to beat’ for an illustration. This verb designates a repeated action; hence, it implies an inherent atelic aspect. When used with a singular agent, the event described can be interpreted in just one way: as a sequence of iterative hitting actions. To describe just a single-action event ‘hit once’, the suppletive verb *hó* ‘hit’ must be used.⁸⁴ Yet, due to the multiplicity of actors and the associated multiplicity of events inherent in a reciprocal situation, it is not possible to form a reciprocal verb with the verb *hó* ‘to hit’, even when both participants each hit just once. (As was shown in 2.2.1.1, the verb *hó* ‘to hit’ extended with *-ak* receives the reflexive reading ‘hit oneself’).

⁸⁴ Note that here, I only rely on semantic criteria (such as translational correspondence) for linking the verbs *táán* ‘beat’ (atelic) and *hó* ‘hit’ (telic) as representing a suppletive opposition.

To stay with the pluractional bases for the reciprocal derivation, recall from section 1.3.4.4 that some verbs in Tima have a partial or complete root reduplication as a pluractional verb form. For example, the verb *kwé-* ‘to hold’ has the reduplicated pluractional form *kwókwà* (accompanied by assimilative vowel change). In order to describe a reciprocal situation ‘to hold each other’, this reduplicated root must be employed:

- (161) *iwariyaraŋe* *ɔ-kwɔkwa-ak* *dowa* *wudu* *kɪdɪ*
 PL.young man PST-hold:PLUR-REC stand LOC:base SG.shelter
 the young men are standing next to the shelter holding each other
 (12.04.09-07-04x.wav)

It is noteworthy that this pattern, i.e. the construal of reciprocals by means of root reduplication (expressing pluractionality) plus affixation, is attested in different unrelated languages (see Nedjalkov 2007b: 181ff. for examples).

Anticipating the argumentation below, we can note here that the association of *-ak / -ak* with atelic constructions (implied by the usage of the pluractional root forms) as found in reciprocal derivation might be regarded as a conceptual link explaining the functional extension to other domains where the notion of atelicity is an essential meaning component, such as the antipassive (antipassives naturally designate atelic situations resulting from the deleting of the direct object, *telos* (see section 2.4) and the valency-neutral aspectual marker of atelicity (see section 2.4.5).

Before moving to indirect reciprocals, a short note is in order on the question of a possible ambiguity between the reciprocal and reflexive readings of the multifunctional suffix *-ak / -ak*. (The ambiguity question does not arise with indirect reciprocals due to the very semantics of indirect reciprocal constructions (see below)). As pointed out by Heine (2000: 8), for many African languages, it is a pervasive pattern for a reflexive marker to acquire a reciprocal interpretation in clauses with plural subjects (a phenomenon also known from a broad range of other unrelated languages). Yet, looking at the distribution of these two functions across the Tima verbal lexicon, we are led to the conclusion that the reciprocal and reflexive functions of the suffix *-ak / -ak* have a complementary nature. That is, the lexical meaning of the verbs allows

just one interpretation, either reflexive or reciprocal, when extended by *-ak* / *-ak*, so that ambiguity is excluded.⁸⁵ The next example pair shall illustrate this point:

- (162) *wórtǵmáádǵh cé-híbí-y-ák* *kídék*
 SG.man IPFV3-stab:PLUR-EP-MID/REFL SG.neck
 ‘The man is stabbing himself.’
 (STH20200203 1)

- (163) *ìwǵrmáádǵh à-híbí-y-ák=à=ǵáǵ* *ìdék*
 PL.man PERF3-stab:PLUR-EP- REC=SOURCE=LOC3P PL.neck
 ‘The men stabbed themselves.’ (not each other)
 (STH20200203 1)

Example (162) describes a reflexive situation type with a singular subject, i.e. the subject participant is the initiator and the endpoint of the same action. The plural subject in (163) does not render the construction with the suffix *-ak* reciprocal, and there is no ambiguity between the reciprocal and the reflexive readings here.⁸⁶ Due to this lexical restriction, to express stabbing as a reciprocal event, the more productive periphrastic construction with *ìwáǵnàǵ* ‘each other’ must be used (see 2.3.4 below).

2.3.3.4 Indirect verbal reciprocals

The so-called indirect reciprocals (Kemmer 1993: 96) imply an indirect relation between the reciprocants (e.g. X and Y gave each other Z) in contrast to direct reciprocals (e.g. X and Y

⁸⁵ Behrens (2007: 331) describes a similar complementary distribution in the Hungarian verb lexicon and further mentions that Malay also shows such a pattern of complementarity. Likewise, in Russian, the author’s native language, either the reciprocal or the reflexive meaning of the morpheme *-sja* is actualized with different sets of verbs.

⁸⁶ Note that in both sentences, the pluractional verbal root *hibí* is used (for telic situations, the suppletive form *cǵǵ* ‘stab (once)’ must be used). In the first case, it is due to the imperfective morphology (the prefix *cé-*) presenting the action as an ongoing (atelic) event, and in the second to the plural subject NP.

pushed each other) where the participants are directly affected. The subgroup of indirect morphological reciprocals comprises only three verbs:

Table 41. Indirect reciprocals

Indirect reciprocals	English translation
(TAM3-root-REC-INS) theme	
<i>à-róhón-àk-áá ihí</i>	they swapped places
<i>cén-téér-àk-áá yàntówán</i>	they share things
<i>cén-tóntòn-àk-áá yámáá</i>	they speak in a dialogue (lit. exchange talks)

The indirect reciprocal verbs designate actions of exchange between participants, and, consequently, these reciprocal constructions contain an additional obligatory argument – the object of exchange. i.e. a Theme argument. In the next example of an indirect reciprocal construction, such a constituent is the plural noun *ihí* ‘places’, introduced by the verbal instrumental *-aa*:

- (164) *ihíná à-róhón-àk-áá ihí*
 PRON3PL PERF3-change-REC-INS PL.place
 ‘They swapped places.’
 (STA20200205 2)

Compare the above example with the transitive non-reciprocal use of the verb *róhón* ‘change’:

- (165) *Hámìt à-róhón-í kìhí*
 Hamid PERF3-change-HT SG.place
 ‘Hamid changed his place.’
 (STA20200205 2)

As can be seen from the examples above, the underlying two-participant structure of the base verb *róhón* ‘change’ is preserved due to the retention of the Theme argument in the postverbal position. Yet the detransitivizing suffix *-ak / -ak* – in its reciprocal function – renders the morphosyntactic coding of the derived clause in (164) intransitive, and, consequently, the Theme participant has to be introduced into the argument structure by means of the instrumental applicative suffix *-aa* attached to the reciprocal verb. Without the suffix *-ak*, the proposition

has a transitive structure: the Theme argument is encoded as a direct object, i.e. it follows the verb directly without any applicative morphology. (Notice the difference with the indirect reflexives described in 2.2.1.2, where the suffix *-ak / -ak* has no detransitivizing effect due to the retention of the underlying Theme argument.)

With indirect reciprocals, the inherent multiplicity of participants and the associated multiplicity of actions naturally require the Theme argument to be marked for the plural and the verb to take the pluractional form (if available). In the next example, it is the reduplicated verbal root of the verb *tòn* (with the accompanying vowel change *o / o*) ‘to return’:

- (166) *àn-tòntòn-àk-áá* *yámáá*
 PERF3-return:PLUR-REC-INS PL.talk
 ‘(They) spoke in a dialogue (lit. they mutually returned talks).’
 (STH20190122 1)

2.3.4 An alternative way of expressing reciprocity (periphrastic reciprocals)

As was noted earlier, the derivation of reciprocals by means of the suffix *-ak / -ak* is only moderately productive in Tima. A much more productive strategy to express reciprocal events is the syntactic construal employing the reciprocal pronoun *iwánlɔ* ‘each other’. Reciprocal constructions with the reciprocal pronoun preserve the transitive argument structure of the underlying two-participant base verb: the pronoun fills the argument position of the second participant, which can be a direct or indirect object (depending on the base verb). The following example illustrates a periphrastic reciprocal construction in Tima:

- (167) *ihíná* *à-méé-y-ì* *iwánlɔ*
 PRON3PL PERF3-look-EP-HT each other
 ‘They looked at each other.’
 (STH20190128 1)

The morphological reciprocal construction with the verb *méé* ‘to look at’ is not possible.

- (169) *Háámìt àṅ-kúrh-í ìwánlẹ̀ nà Álì
 Hamid PERF3-push-HT each other CONJ Ali
 intended meaning: ‘Hamid and Ali pushed each other.’

A grammatically correct version with a periphrastic strategy is to express both participants preverbally, as illustrated in (170):

- (170) *Háámìt nà Álì àṅ-kúrh-í ìwánlẹ̀*
 Hamid CONJ Ali PERF3-push-HT each other
 ‘Hamid and Ali pushed each other.’
 (STH20200203 5)

On the other hand, with *ìwánlẹ̀*, it is possible to construe the reciprocal situation as a telic event. That is, the adding of the telicity/transitivity marker *-i / -l* is not precluded in this case. Recall that for morphological reciprocals, this framing is not available (so that we are even in a position to assert that in Tima, morphological reciprocals yield an atelic interpretation of the event described, due to the constraints on the available morphosyntactic coding of such constructions).

As was alluded to in the introduction to the section on reciprocals, morphological reciprocals can be readily substituted by periphrastic reciprocal constructions. Thus, the sentence in (170) above is a semantic equivalent to the morphological reciprocal construction in (171) below:

- (171) *Háámìt nà Álì àṅ-kúrúh-àk*
 Hamid CONJ Ali PERF3-push:PLUR-REC
 ‘Hamid and Ali pushed each other.’
 (STH20200203 5)

Yet, while it is possible to form a reciprocal predicate by means of the periphrastic construction with an unrestricted number of verbs, the morphological strategy is restricted to the verbs (attested so far) enumerated earlier in Table 35 and Table 36. That is, semantically, periphrastic reciprocals do not have any notable limitations that would motivate the establishment of a coherent class of verbs in terms of shared semantics. Any verb can be used in these constructions as long as the resulting proposition is pragmatically adequate.

2.3.5 Concluding remarks

Reciprocal situations can be expressed in Tima both morphologically, through the affixal extension, and syntactically, using the reciprocal pronoun. The latter strategy is highly productive in Tima, showing no particular restrictions on the lexical verb bases. The attested number of morphological reciprocals is not particularly high due to lexical constraints allowing the reciprocal derivation from only a small number of two-participant verbs that predominantly are symmetrical predicates (i.e. implying an equal status in terms of the role specification of both participants). Lexical restrictions on the verb bases also account for the complementary distribution of reciprocal and reflexive readings of the suffix *-ak / -ak* with different verbs.

On the other hand, the construal of a reciprocal event with a telic aspectual value (by attachment of the transitivity/telicity marker *-i/-i*) is only possible with periphrastic reciprocals. Notably, morphological reciprocals always select for pluractional, i.e. atelic forms of verbal roots (if available); the construction of a reciprocal predicates with the corresponding non-pluractional verb form is prohibited. In periphrastic reciprocals, on the contrary, the usage of *ιωάνλη* ‘each other’ in the direct object position facilitates a telic reading due to the presence of an endpoint argument – albeit only structural. Indeed, this aspectual opposition holding between the two types of reciprocal constructions brings about the association of *-ak / -ak* with the notion of atelicity. Generally, an atelic interpretation follows naturally from the plurality of actors resulting in a plurality of actions. Yet the available morphosyntactic mechanisms deployed in morphological reciprocals per se preclude simultaneous implementations of functional elements that could render the proposition telic. The observations above might suggest a conceptual link explaining the functional extension of the morpheme in question to the antipassive examined immediately below (a function closely associated with atelicity), and to the aspectual marker of atelicity when used independently of verbal valency (described in section 2.4.5).

2.4 The antipassive function of *-ak / -ak*

2.4.1 General remarks on antipassive constructions in Tima

The standard (structural) definition describes the derivation of antipassives as a morphosyntactic operation whereby the P argument of the basic transitive predicate is deleted (or demoted), yielding an intransitive construction with the original A functioning as a single core argument. Consequently, the antipassive is defined as an agent-preserving derivation. Commonly, there is some overt verbal marking of this morphosyntactic operation, i.e. the antipassive is a verbal category. From the semantic-conceptual point of view, Shibatani (2006: 237), for example, emphasizes that “[a]ntipassive situations contrast in meaning with those expressed in the active [...] voice regarding the attainment of the intended effect upon a patient.” Implied in this definition is the relational nature of antipassive constructions, which alternate with their underlying transitive counterparts in terms of the conceptualization of the effect of the action described by the verb: the antipassive does not specify any effect resulting from the action on a second participant of the underlying transitive structure, but focuses on the agent and its activity instead. The following example illustrates the antipassive derivation in Tima:

- (172) *Hààmìt àŋ-kárh-àk*
Hamid PERF3-carve-AP
‘Hamid was/has been carving.’
(STH20200209 2)

The underlying transitive clause is shown next:

- (173) *Hààmìt céŋ-kárh fòndók*
Hamid IPFV3-carve mortar
‘Hamid is carving a mortar.’
(STA20200210)

The sentence in (172) has an intransitive structure; the NP in the subject position is a single core argument. The comparison with the underlying transitive predicate in (173) makes it clear that the antipassive derivation is an agent-preserving operation; the P participant of the original

predicate is eliminated from the argument structure of the resulting construction (ex. (172)); the suffix *-ak* is an overt linguistic encoding of the process described.

It is important to note that there is no typological one-size-fits-all definition of what constitutes an antipassive construction cross-linguistically (in contrast to reflexive and reciprocal constructions). As some authors note in this regard, it is futile to attempt to come up with a uniform definition of the antipassive due to the enormous differences in its manifestation (formal and functional) in different languages (e.g. Heath 1976; Comrie 1978; Tsunoda 1988; Cooreman 1994; Gildea et al. 2016). The difficulty in defining the antipassive is partially connected to the fact that in most languages, the antipassive is expressed by multifunctional morphemes. So, for each language, the definition of what constitutes an antipassive will depend on the functional distribution of a morpheme encoding various functions; it is then necessary to exclude uses that are definitely not antipassive (e.g. middle-reflexive and reciprocal, as is the case in Tima). Due to the continuous (as opposed to discrete) nature of the meaning of functional elements, a fair amount of unclear border cases are always to be reckoned with. Nevertheless, it must be possible, in the majority of cases, to delineate the antipassive from other meanings actualized by the multifunctional morpheme employed in antipassive derivation.

Speaking in general terms about antipassive constructions, it is worth noting that Tima has what is called the semantic-pragmatic type of antipassive function.⁹⁰ That is, the antipassive is employed in contexts in which the focus is on the agent and its activity, and the P participant is, on the contrary, not important or relevant to the discourse. So far, the syntactic usage, i.e. the usage of the antipassive to facilitate certain syntactic operations, has not been attested in

⁹⁰ Cooreman (1994; see also Comrie 1978, 1989; Dixon 1994; Foley and Van Valin 1984, 1985) distinguishes between two main types of antipassives: antipassives used for semantic/pragmatic reasons, and antipassives used for syntactic reasons. The syntactic type is generally relevant for ergative languages where the antipassive is employed to allow for such syntactic operations as topicalization, relativization, questioning, coordination, etc., i.e. it serves as a syntactic pivot. That is, in ergative languages, an argument has to be marked as absolutive in order for it to enter the named syntactic operations. To be marked as absolutive, the antipassivization process must be applied. Cooreman (1994: 49) further notes that languages with a syntactic antipassive also recruit these constructions for semantic/pragmatic reasons (see also Janic and Witzlack-Makarevich 2021: 23) and that, actually, the syntactic function of the antipassive in ergative languages appears to be an extension of the (primary) semantic/pragmatic function (see also Janic 2016: 165).

Tima. Future research might shed more light on this question, as Tima does have features of split ergativity (Dimmendaal 2010a).⁹¹

In the introduction to this chapter (see section 2.1), it was shown that the surface structure of the derived antipassive is also shared by the reflexive and reciprocal constructions. It was also said that it is the correlation between such contributing factors as the lexical meaning of the verbs, the thematic roles of participants, and the kinds of relations holding between the predicate and the participants that determine a particular reading of the derivation. Next, after exploring aspects of the surface realization of the antipassive meaning in Tima (section 2.4.2), section 2.4.3 elaborates on semantic aspects of the antipassive in Tima. Throughout the discussion, typological observations pertaining to the antipassive are considered where they are relevant to the description of the Tima situation.

2.4.2 Properties of the antipassive in Tima related to its overt realization

The morpho-phonological form of the antipassive function in Tima is the suffix *-ak* / *-ak*; in one case, with the verb *kóyòk* ‘cook, make/prepare food’, we might assume that the derived antipassive form has reached a high degree of lexicalization. The derived form still transparently corresponds to the basic transitive *kó* ‘make, prepare, build’, yet the suffix has assimilated to the root vowel, which is probably an indication that it is no longer perceived as an analyzable element, but represents a single lexeme meaning ‘cook’.

The following example illustrates the usage of the verb *kóyòk* ‘cook’ in a sentence:

- (174) ...*ʊ-kɔ-y-ɔk-aa* *ɪ=nɛɛy* *ɲ=wɛɛn*
 P-make-EP-AP-INS DAT=1PL.INCL ERG=mother
 ‘...and the mother cooked for us.’
 (310108_33_Adlaan_UsePlants_031)

The antipassive marker directly follows the verbal root (i.e. in its antipassive function, the suffix *-ak* / *-ak* is mutually exclusive with the transitivity marker, which occupies the first postverbal

⁹¹ Note, however, that according to Cooreman’s (1994) assessment, only the so-called deep ergative languages employ the antipassive for syntactic purposes.

slot in the verbal structure). If the verb also has a pluractional form of the root (see 1.3.4.4 on pluractionality), this pluractional form is used in the antipassive derivation (similar to the derivation of reciprocals; see 2.3.3.3).⁹² For instance, the verb meaning ‘turn’ has two forms: the simple form *rìh*, used in telic contexts and the pluractional *rìih* with a long root vowel, employed in atelic constructions; the antipassive construction, then, requires the usage of the pluractional form *rìih*, e.g. *cérìihàk* (IPFV3-turn:PLUR-AP) ‘3P is/are plaiting’.

The following table presents the attested antipassive verbs in Tima:

Table 42. Antipassive verbs in Tima

Verbal base	Gloss	AP-derived verb form (TAM3-root-(EP)-AP)	English translation	Transitive counterpart ((TAM3)-root-(EP)-(HT/CAUS))	English translation
Verbs denoting agricultural activities					
<i>dól-</i>	sow	<i>cén-dólò-w-àk</i>	3P is sowing	<i>dólàk</i> (plus object)	Sow it!
<i>kàbú</i>	dig	<i>céη-kàbú-y-àk</i>	3P is digging	<i>àηkàbú-y-í kèbá</i>	3P has dug a hole
<i>kóγóm</i>	cut	<i>céη-kóγóm-àk</i>	3P is harvesting	<i>àη-kóγóm-í cìtì</i>	3P has cut the cloth
<i>mòh(àk)</i> maybe lexicalized?	take the seeds out by pulling			Not attested	
<i>pàrá</i>	clear (field)	<i>cém-pàrá-àk</i>	3P is clearing the field	<i>cém-pàrá kìràη</i>	3P is clearing the field
<i>róη</i>	sow	<i>cé-róη-àk</i>	3P is sowing	<i>róη yéèh</i>	Sow sorghum!
<i>táγò-</i>	clear (field)	<i>cén-táγòw-àk</i>	3P is clearing the field	<i>táγ-òk kìràη</i>	Clear the field!
<i>μìγù-</i>	beat, thresh	<i>cén-μìγù-w-àk</i>	3P is threshing	<i>cén-μìγ-ùk yéèh</i>	3P is threshing sorghum
Verbs denoting handcraft					

⁹² Recall from the discussion of the reciprocal constructions with the suffix *-ak* ~ *-ak* that, there too, when available, the pluractional verbal root form must be used. That is, the nature of the corresponding events (non-punctual in the case of the antipassive and pluractional (involving at least two participants) in the case of reciprocals) finds reflection in the linguistic form expressing the corresponding state of affairs.

<i>ból</i>	forge	<i>cém-ból-àk</i>	3P is forging	<i>cém-ból kòr̀àḡkáj</i>	3P is forging a spade
<i>kàrh</i>	carve	<i>céḡ-kàrh-àk</i>	3P is carving	<i>céḡ-kàrh f̀òndòk</i>	3P is carving a mortar
<i>mòrà</i>	plaster	<i>cé-mòrà-y-àk</i>	3P is plastering	<i>p̀ínàl cé-mòrà-y-í kùrtú</i>	3P is plastering the house
<i>rih/riìh</i>	turn	<i>cé-riìh-àk</i>	3P is plaiting (ropes)	<i>à-rih-í c̀íjí</i>	3P turned the cloth
<i>t̀h</i>	skin	<i>cén-t̀h-àk</i>	3P is skinning	<i>à-t̀h=à=ṡáj</i>	You skin it

Verbs denoting other kinds of work activities

<i>bàrh</i>	wash	<i>cém-bàrh-àk</i>	3P is washing	<i>cém-bàrh c̀íjí</i>	3P is washing a cloth
<i>brààr</i>	peel	<i>cém-brààr-àk</i>	3P is peeling	<i>cém-brààr kùmós</i>	3P is peeling the banana
<i>c̀ercér</i>	write	<i>cén-c̀ercér-àk</i>	3P is writing	<i>cén-c̀ercér kápé</i>	3P is writing a letter
<i>(k)áṡùk</i>	hunt	<i>céḡ-káṡùk-w-àk</i>	3P is hunting	<i>céḡ-káṡùk kìḡàwúḡ</i>	3P is hunting a hyena
<i>kó</i>	make, prepare	<i>céḡ-kó-y-àk</i>	3P is cooking/preparing food	<i>céḡ-kó-y-ó ṡùk</i>	3P is making porridge
<i>míní</i>	cook	<i>cén-míní-y-àk</i>	3P is cooking	<i>à-míní-í kábòh</i>	3P has cooked meat
<i>ḡól-</i>	scoop	<i>céḡ-ḡól-w-àk</i>	3P is scooping	<i>ḡólàk ídí</i>	Scoop water!
<i>p̀urúúr</i>	stir	<i>cém-p̀urúúr-àk</i>	3P is stirring	<i>cém-p̀urúúr ṡùk</i>	3P is stirring the porridge
<i>ṡól</i>	clean, sweep	<i>cén-ṡól-àk</i>	3P is cleaning	<i>cén-ṡól ḱhí</i>	3P is cleaning the place

Verbs with generic ‘people’ as an implied P participant in the antipassive construction

<i>dòdòh</i>	provoke, offend, despise	<i>cén-dòdòh-àk</i>	3P provokes/offends (people)	<i>cé-dòdòh=nèèy</i>	they despise us
<i>ḡàmóḡ</i>	admonish, criticize	<i>cé-ḡàmóḡ-àk</i>	3P admonishes/criticizes (people)	<i>cé-ḡàmóḡ cíbá</i>	3P admonishes the child

Other verbs					
<i>cédəm</i>	pick (up), gather	<i>cén-cédəm-ák</i>	3P is picking (seeds)	<i>cìhók cén-cédəm íbà íbí</i>	The bird is picking seeds
<i>dòyá</i>	steal	<i>cén-dòyá-ák</i>	3P steals (habitually)	<i>àn-dòyá-á dśrdààgà</i>	3P has stolen the wheelbarrow
<i>tèwò</i>	hit, clap	<i>cén-tèwòtèwó-ák</i>	3P is clapping hands	<i>àn-tèwò-w-í idàwùn</i>	3P has clapped hands once
<i>tùk</i>	throw, drop	<i>kókwàák cén-tùkw-ák</i>	The hen is laying (eggs)	<i>kókwàák cén-tùk íhán</i>	The hen is laying eggs

As seen from the table, the antipassive verbs have corresponding transitive bases (except for the verb *màhák* ‘take out seeds’, whose status as lexicalized or derived is not clear). Significantly, as is also apparent from Table 42 above, the derived verbs correspond semantically to their underlying transitive counterparts. Most descriptions of the antipassive in different languages underline the meaning correspondence between the derived construction and the base verb as one of the definitional criteria of antipassive (e.g. Janic and Witzlack-Makarevich 2021). That is, for a given construction to be considered antipassive, it should be possible to show that the semantic relationship between the base verb and its derived counterpart is transparent, i.e. no idiosyncratic reading should arise as a result of the derivation.⁹³

With individual verbs, we observe a partial semantic correspondence in meaning. That is, some verbs participating in the antipassive alternation have a very generalized meaning with regard to a possible P participant: *kóyó* ‘make, prepare, build’, *tùk* ‘throw, drop, lay’, *rìh/rìih* ‘turn’, *kóyóm* ‘cut’. Under antipassivization, the verbs acquire a meaning implying a highly specific presupposed object. The antipassivized verb *kóyòk* denotes the activity of preparing food, the verb *tùkwàk* means ‘lay eggs’, *rìihàk* conveys the meaning ‘plait (ropes)’, and *kóyómàk* denotes ‘harvest’. Compare the two constructions (antipassive and the basic transitive) and for each of these verbs:

⁹³ Recall that in the case of the middle function of the suffix *-ák ~ -ak* (2.2.2.2), we do observe such an idiosyncratic meaning shift when the verb is extended with the suffix. For example, *àhkùmúnàk kàhú* ‘3P remembered the name’ has the verb *kùmún* ‘find’ as its transitive base, e.g. *àhkùmún cibá* ‘3P has found/seen the child’.

- (175) a. ...*ɔ-kɔ-y-ɔk-aa* *ii=nɛɛy* *ɲ=wɛɛn* (repeated)
 PST-make-EP-AP-INS DAT=1PL.INCL ERG=mother
 ‘...and the mother cooked for us.’
 (310108_33_Adlaan_UsePlants_031)
- b. *cé-dìŋ-kɔ-y-ɔ́=á=tàŋ=dá* *kùrtù*
 IPFV-FUT1SG-build-EP-HT house
 =SOURCE=LOC3P =1SG
 ‘I will have finished building the house’
 (STH20190113 1)
- (176) a. *íwórmáádásh* *àn-túk=à=táŋ* *ídik* *náhi*
 PL.man PERF3-drop=SOURCE=LOC3P beans ground
 ‘The men have thrown the beans on the ground.’
 (STH20190128 6)
- b. *kókwàák* *cén-túk-w-ák*
 SG.hen IPFV3-drop-EP-AP
 ‘The hen is laying eggs.’
 (STA20200205 4)
- (177) a. *kàhúnèn* *à-rìh-í* *cíí*
 SG.woman PERF3-turn-HT SG.cloth
 ‘The woman has turned the cloth.’
 (STH20190126 1)
- b. *ìhàhúnèn* *cé-rìih-àk*⁹⁴
 PL.woman IPFV3-turn:PLUR-AP
 ‘The women are plaiting.’
 (12.04.09-01-01.wav)

⁹⁴ Recall that the same verb form can be used in reflexive-possessive constructions when a body part argument is expressed as a direct object, e.g. *cé-rìih-àk yáàm* (IPFV3-turn-MID/REFL hair) ‘She is plaiting her hair’.

(178) a. *cibóónín* *àḡ-kòróm-á=à=ḡáḡ* *yáàm* *à=kàhúnèn*
 SG.girl PERF3-cut-HT=SOURCE=LOC3P hair SOURCE=SG.woman
 ‘The girl has cut the woman’s hair.’
 (STA20200208 4)

b. *kwaarəh=na* *gìḡ=na* *kòróm-ak=áḡaḡ* *ḡihwaa*
 dry.season=DEM.PROX all=DEM.PROX cut- ERG.people
 AP=SOURCE=INS:LOC3P
 ‘All of the dry season the people harvest.’
 (021007_2_KandaBelo_Agricultural Year)

In such cases, it is a matter of socio-cultural conventionalization when one particular component is taken over from the whole range of possible meanings associated with the base verb in order to be used in an antipassive construction, so that community members know that *céḡkóyòk* means ‘3P is cooking’ and not ‘3P is building/is a construction worker’.⁹⁵ Note also that in these cases, no idiosyncratic meaning not linked to the base verb emerges, since it is likewise possible to express the corresponding idea in a transitive clause. Compare the following alternation pairs:

(179) *kókwàák* *cén-tùk-w-àk* vs. *kókwàák* *cén-tùk* *ihán*
 SG.hen IPFV3-lay-EP-AP SG.hen IPFV3-lay PL.egg
 ‘The hen is laying (eggs).’ ‘The hen is laying eggs.’

(180) *céḡ-kó-y-òk* vs. *céḡ-kó-y-ó* *ìtùk*
 IPFV3-cook-EP-AP IPFV3-make-EP-HT porridge
 ‘She is cooking.’ ‘She is cooking porridge.’

It was stated above that antipassive verbs derive from transitive base verbs. Some verbs, however, have as their basis precategory verbal roots. Interestingly, the transitive counterpart

⁹⁵ That is, nothing aside from socio-cultural convention precludes some other meaning from being used in an objectless construction with an implicitly understood referent of the omitted object. For example, in Russian, a relatively general verb *stroit* ‘build, construct, shape’ can be used in such phrases as e.g. ‘build (any kind of construction)’, but also ‘make plans’, etc. Yet the derived antipassive *stroit’sja* (build.AP/REFL) conveys a very specific meaning ‘to build a living place for oneself (and one’s close family)’; it cannot be used when the house is being built for someone else.

in such cases is always formed by means of the causative suffix *-Vk* (see 3.2.3 below on the transitivizing function of the causative morpheme *-Vk*). For example, *céηηólówàk* ‘3P is fetching (water)’ has as its transitive counterpart the form *ηólòk*, as in *céη-ηól-òk ídí* ‘(S)he is fetching water’, where the last segment of the verb *-òk* serves as a transitivizer; *ηól-* cannot be used in phrases until derived either for antipassive or for causative. For convenience, the attested antipassives based on precatatorial roots and their causative counterparts are listed Table 43:

Table 43. Antipassives from precatatorial roots and transitive counterparts

Antipassive verb form (IPFV3-root-EP-AP)	English translation	Transitive counterpart	English translation
<i>cén-dóló-w-àk</i>	3P is sowing	<i>dól-òk!</i>	Sow (it)!
<i>céη-ηóló-w-àk</i>	3P is fetching (water)	<i>ηól-òk ídí!</i>	Fetch water!
<i>cén-tářò-w-àk</i>	3P is clearing (the field)	<i>tář-òk kìrán!</i>	Clear the field!
<i>cén-ṭùyù-w-àk</i>	3P is threshing	<i>ṭùy-ùk yéèh!</i>	Thresh sorghum!

Since we are dealing with the structural properties of antipassive constructions in this section, the question of the expressibility of the omitted object deserves attention here as well. That is, some definitions loosely describe an antipassive derivation as a morphosyntactic operation whereby the initial object of the base transitive verb is deleted or demoted; in the case of the deletion of the object, “there is always an option of including it” (Dixon and Aikhenvald 2000: 9).⁹⁶

In Tima, the antipassive construction can be described as a patientless antipassive, meaning that an overt expression of the P participant is blocked under antipassivization; the only way to overtly express the deleted object participant is to return to the transitive clause. The possibility of reintroducing the eliminated second participant, e.g. as an oblique argument, does not exist for Tima. In this respect, it is noteworthy that Heaton (2017), in her broad typologically oriented study of antipassive(like) constructions, estimates that of the 133 antipassive constructions in her sample, 96 (72.2%) are exclusively patientless. Relatedly, Creissels (2016) notes that the antipassive constructions found in Africa are patientless. One notable exception is Soninke, where an overt expression of the P participant as an oblique argument is possible, albeit only in

⁹⁶ Janic (2013: 19-20), based on her sample of languages, questions the possibility of object inclusion as an obligatory criterion for the definition of antipassive.

rare cases. (See also Bostoen et al. (2015) for some instances of antipassives with oblique P participants in individual Bantu languages.)

In Tima, there is only one construction attested that might look like an object-demoting operation, involving the derivation of the verb with *-ak* / *-ak*:

- (181) *wórɿsmáádəh* *àn-tʰówák⁹⁷-áá* *còràŋ* *áyín* *tʰəndɔ̃*
 SG.man PERF3-throw.AP-INS SG.stick towards road
 ‘The man has thrown the stick towards the road.’
 (15.03.10_06_08.wav)

At first sight, the construction conforms to the characterization of the antipassive: it has an agentive subject acting volitionally to achieve some effect on the P participant; the verb with the suffix *-ak* is further extended with the instrumental applicative to introduce this second participant into the argument structure. This pattern deviates from the prototypical transitive construction in Tima (prototypically, the transitive object follows the underived verb directly or comes after the high transitivity marker *-i* / *-i*) and might thus be interpreted as having a marked object akin to an oblique marking. Yet one of the crucial semantic-pragmatic functions of antipassive is not met here: as stated first by Cooreman (1994: 67) and taken up in a recent collection of articles (Janic and Witzlack-Makarevich 2021), the core function of the antipassive is the backgrounding of the P participant due to its unspecificity, non-referentiality, non-identifiability, etc. In example (181) above, the referent of the participant in the object position cannot be defined in these terms: *còràŋ* ‘stick’ is referential and individuated, as reflected in the usage of the singular marker.⁹⁸ Moreover, the predicate describes a telic, punctual action.⁹⁹ The antipassive, on the contrary, according to most definitions encountered in the literature (e.g. Cooreman 1994; Polinsky 2017; Janic and Witzlack-Makarevich 2021, among many others), goes hand in hand with the imperfective, atelic reading). So the example provided does not fit the criteria of an antipassive construction with a demoted object. For the

⁹⁷ It must be noted that the synchronic status of the verb *tʰów(ák)* is not quite clear. Although the unmarked counterpart *tʰówá* ‘throw, drop’ is attested in the database (15.01.08_86sg.wav) as an isolated item, it is always the derived form *tʰówák* that is elicited in translations of whole sentences, indicating that this form might be lexicalized.

⁹⁸ Admittedly, I have not carried out a systematic investigation of the expression of referentiality in Tima to prove that a singular NP can be stated as being referential in any case. However, nor do I have any counterevidence for this.

⁹⁹ That is, I am not aware of any atelic effect at the clausal level from the employing of *áyín* ‘towards’.

lack of another explanation at the moment, we must for the time being consider the case described as an isolated idiosyncratic usage.

2.4.3 Features of antipassive in Tima related to semantics

In Table 42 above, an attempt was undertaken to divide the attested verbs into semantically based subclasses. The largest groups denote different kinds of specific activities (repeated here for convenience): a) verbs denoting agricultural activities: *dólówàk* ‘sow’, *kàbúyàk* ‘dig’, *kóçómàk* ‘harvest’, *mòhàk* ‘pull out seeds’, *pàráàk* ‘clean the field’, *róhàk* ‘sow’, *táçòwàk* ‘clear the field’, *tùyùwàk* ‘thresh’; b) handcrafting: *bólàk* ‘forge’, *kàrhàk* ‘carve’, *mòráyàk* ‘plaster’, *rìihàk* ‘plait (ropes)’, *tshàk* ‘skin’; c) other daily or ordinary activities: *bàrhàk* ‘wash (clothes)’, *brààràk* ‘peel’, *cércèràk* ‘write’, *kàtùkwàk* ‘hunt’, *kóyòk* ‘cook’, *miníyàk* ‘prepare food’, *hólówàk* ‘fetch water’, *pùrúúràk* ‘stir’, *tóòlàk* ‘clean (place, room)’.

Most of the verbs appear to denote activities that have socio-cultural significance for the Tima community, as they represent daily activities carried out regularly. As Payne (2021) aptly observes, “[a]ntipassives are sometimes described as ‘activity naming’ [...] constructions, as they may be used to name characteristic jobs that the understood A participant excels at or [regularly; NV] does.” (Payne 2021: 459). The interpretation of the meaning associated with the deleted object in antipassive constructions is thus a matter of conventionalization.

It was stated above that, in any given language, it is a particular set of features that would define an antipassive construction in that language. The definition should enable (as far as possible) the delineation of antipassives from other constructions in the language sharing the same morphosyntactic coding. In Tima, then, we should look for the properties that distinguish the antipassive from middle-reflexive and reciprocal constructions. It is suggested here that the antipassive construction in Tima can be efficiently (inevitable border cases notwithstanding) defined in terms of feature specification of the participants, i.e. A and the implied P and the relationship holding between these participants and the predicate. In what follows, an attempt is undertaken to provide such a definition.

As noticeable from the list of attested antipassive verbs (Table 42), most verbs have as their second participant (i.e. the referent of the direct object deleted under antipassivization) a referential entity characterized by prototypical patientive features, i.e. [-VOL, -INST, +AFF]

(see 1.2.2.3). In most cases, this argument refers to an inanimate entity that designates either an affected or effected object. Here, ‘object’ is used as a semantic term, i.e. as a part of the semantic concept of an ‘effected object’ – an entity created as a result of the activity denoted by the verb – and an ‘affected object’ – an entity undergoing some sort of change resulting from the activity. The following examples illustrate the antipassive constructions with an effected (ex. (182)) and affected (ex. (183)) object:

(182)	<i>cèm-ból</i>	<i>kòḷàḡkâḡ</i>	vs.	<i>cèm-ból-àk</i>
	IPFV3-forge	spade		IPFV3-forge-AP
	‘3SG is forging a spade’			‘3SG is forging’
	(Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)			

(183)	<i>ṭíyúk</i>	<i>yèèh</i>	vs.	<i>cén-ṭíyù-w-àk</i>
	thresh.CAUS	sorghum		IPFV3-thresh-EP-AP
	‘Thresh sorghum!’			‘They are threshing.’
	(STH20200207 2)			

Both effected and affected object constructions participating in the antipassive alternation presuppose a second participant that is physically and conceptually distinct (from A). This condition is less problematic in the case of effected objects due to their coming into being as a result of the activity described by the verb. With affected objects, it is the condition of non-coreference between A and P that is a determining factor for distinguishing the antipassive from reflexive constructions. That is, the conceptual structure of the event described by the antipassive construction presupposes the effect of the action on the second participant that is clearly distinct from the initiator (A).

The complementary distribution between antipassive and reciprocal constructions, the morphosyntactic encoding of which is also shared by the antipassive, is based on the lexical properties of the verbal bases. As was pointed out in section 2.3.1, reciprocal constructions select for lexical bases that allow the two implied participants to perform both roles, A and P, since otherwise it is not possible to construe the reciprocal relationship ‘A and B V(erb) each other’.

The overwhelming majority of verbs with antipassive derivation have an inanimate P participant in their conceptual structure. However, two verbs have as their implicit P participant

the generic *people* in the derived antipassive construction: *dədəhək* ‘provoke, offend (people)’ and *ɣəmór* ‘admonish, criticize (people)’:

- (184) *mɛɛy* *kɪ-ɪ-dədəh-ak=nɛɛy=aj*
 PRON1PL.INCL NEG-PL-provoke-AP=1PL.INCL=NEG
 ‘We don’t provoke anybody.’
 (151010_08_Hamad_1_003)

- (185) *ihinΛ=ye* *diyaj* *ya-dədəh=nɛɛð*
 PRON3PL=FOC come:VEN ?-provoke=1PL.INCL
 ‘(But) they came to provoke us.’
 (151010_08_Hamad_1_005)

The first sentence (ex. (184)) represents an antipassive construction, i.e. the verb is extended with the suffix *-ak*, and the overt morphosyntactic structure is intransitive; there is no overt argument referring to the object of provoking. In the transitive clause (ex. (185)), the verb is underived, and the object is overtly expressed through the cliticized pronominal marking referring to the 1st person plural inclusive. As seen from the English translation of (184), the participant towards which the act of provoking is directed has a general reference ‘anybody’ (or ‘people’). A reciprocal reading is not possible with *dədəhək* ‘provoke, offend (people)’ or *ɣəmórək* ‘admonish, criticize (people)’.

The residual group (called “Other verbs” in Table 42) comprising the verbs *ɛédəmák* ‘pick (seeds)’, *dəyáək* ‘steal (habitually)’, *tɛwòtɛwóək* ‘clap hands’, and *túkɔək* ‘lay eggs’ is somewhat heterogeneous, and it is difficult to give it an overarching label. Here, the verbs included cannot be assigned to the above relatively homogeneous semantic types. Individual verbs in this subgroup allow a different interpretation than antipassive. For example, the verb *tɛwòtɛwóək* ‘clap hands’ could also be assigned to the group of verbs designating body movement, i.e. to the middle domain discussed in 2.2.2.4. That is, from a purely conceptual point of view, the predicate describes an event unfolding within the sphere of the subject participant, i.e. a one-participant self-directed (as opposed to outward directed) middle situation type; there is no transfer of energy toward any distinct entity. Yet, from the structural perspective, we have a derived intransitive construction; the base verb is a two-participant verb, the derived verb is denotationally equivalent to the transitive base verb, the original A is

transitivity is the conceptually implied direction of the action: from A to a distinct entity. By contrast, in the middle situation type, the effect of the action either accrues back to the initiator or there is no transfer of energy from A at all; the action remains self-contained in the sphere of the initiator.

In summary, the A participant in the antipassive lacks the feature [+AFF] that is inherent to middle-reflexive (by virtue of self-directedness) and reciprocal situations (by virtue of a simultaneous assignment of A and P roles). Based on the lexical distribution of the suffix *-ak* / *-ak* (i.e. lexical features that unequivocally correlate with either the reflexive reading or the antipassive reading), it seems reasonable to draw the tentative dividing line in such a way that we would expect the antipassive reading when the intransitive derived alternation is agent-preserving and the agent is characterized by the feature specification [-AFF]. This characterization contrasts with what we expect in the case of a reflexive/middle reading, where the agent is [+AFF].

Of course, it is not only the participants' properties that define what an antipassive is; the lexical bases of verbs must be considered as well.¹⁰⁰ As pointed out earlier, the majority of the verbs participating in antipassive alternations describe activities. Activities commonly lexicalize the MANNER semantic component, i.e. the focus is on how the designated activity is carried out rather than on the result of this activity. The correlation between the antipassive alternation and the manner specification lexicalized in the verb base is a common cross-linguistic observation (Say 2021: 181; Kazenin 1994; Levin 2015; Malchukov 2015; Polinsky 2017). This specification excludes the most prototypical transitive verbs as bases for antipassives. Prototypical transitive verbs describe a highly affected P participant, i.e. a patient undergoing a complete change of state as a result of the action described by the verb (e.g. 'break', 'kill', etc.). Such verbs lexicalize the RESULT component, and, as stated by Levin (2015: 1640), due to the lexicalization of the result component in the verbal meaning, the direct object, i.e. the participant whose state changes, must be overtly expressed. This requirement conflicts with one of the main functions of the antipassive – the suppression of the second participant.

Based on the definition of the antipassive as a marked alternation of a transitive (unmarked) proposition, it would be interesting to investigate what factors favor the antipassive (i.e. intransitive) representation of the corresponding two-participant event. In the literature, the

¹⁰⁰ Lexical restrictions on antipassivization from a cross-linguistic perspective have been described, e.g., by Heath (1976: 211), Cooreman (1994: 60), and Janic (2013).

application of the antipassive derivation is often described in terms of discourse-pragmatic properties of the P participant: when the P is unknown, unimportant, irrelevant, unspecified, etc. Connected to this view, the backgrounding function of the antipassive is highlighted. Another aspect is the degree of affectedness of P. The contrast between the transitive and the derived antipassive constructions reflects the incompleteness of the result associated with the action denoted by the base verb. Thus, Polinsky (2013) asserts that the primary semantic function of the antipassive pertains to the non-affectedness and non-individuation of the P participant.

However, it might be equally possible for a speaker to choose an antipassive construction when the main concern is with the agent and the associated activity. It is how the analyst rationalizes the recruitment of the construction (in terms of the discourse properties of P) rather than the motivation of the speaker. Janic (2021: 458) fittingly notes: “One may go so far as to suggest that, in at least some languages, an antipassive is simply not concerned with the existence of any possible P.” Similarly, Givón (1994: 4, 2001: 94, 168) emphasizes that the discourse-pragmatic function of the antipassive is the highlighting of the topicality of the A participant, so the focus is on the action itself, not on the status of the second participant. The interpretation of the discourse-pragmatic motivations for antipassivization along these lines elucidates the conceptual closeness of the antipassive and the reflexive-middle; in both cases, the predication revolves around a sole participant and describes an event unfolding within the sphere of this sole participant.

The semantic-pragmatic effects of the antipassive on the clausal level include: a) the relative topicality of the A participant; and b) the focus on the activity itself, with the concomitant non-punctual reading, i.e. the aspectual shift towards imperfectivity/atelicity. Hemmings (2021: 585) summarizes the semantic effects of the antipassive operation as semantic, morphosyntactic, and discourse-pragmatic intransitivity, which, again, brings the antipassive and middle situation types closer together, offering a possible explanation for their identical coding in Tima.

2.4.4 Productivity of the antipassive in Tima

The antipassive derivation in Tima shows a relatively high degree of productivity: out of some 400 verbs analyzed, 28 participate in the antipassive alternation. That is, synchronically, the antipassive derivation appears to be the most productive derivation exploiting the multifunctional suffix *-ak / -ak*, following reflexive-possessive, reciprocal, and then direct reflexive constructions (judging by the number of attested cases!). The one-participant middle verbs with the same suffix are high in number (47 out of 392), but these are mostly lexicalized and thus cannot be viewed as productive from the synchronic perspective.

An additional indication of the productive nature of the antipassive derivation comes from the following incident. When asked whether the (antipassive) form *ceŋkaləmak* (intended meaning ‘3P bites/is biting’) from the transitive verb *kalə* ‘bite’ is possible, Aboh first denied the existence of such a form and suggested a transitive sentence instead: *kàbóh=lí ŋ-kálə̀m-ə=nà* (meat=FOC P-bite-EP=ERG1SG ‘I am biting at the meat’. After some thought, however, he came up with a situation where the antipassive form would be pragmatically (and grammatically) acceptable: when, e.g., explaining (by imitating the biting movements) to small children what the meaning of ‘bite’ is, one may say:

- (187) *céŋ-kálə̀m-àk-ə=dà*
IPFV1SG-bite-AP-EP=1SG
‘(Look), I am biting.’
(STA20200211 1)

This example might suggest an even higher productivity of the antipassive derivation than attested so far when prompting appropriate contexts of use.

Still, there are some lexical restrictions on possible verb bases that are not predictable. Consider the following sentence pair from the story “Agricultural Year”:

- (188) *ɪ-taʎv-w-ak=a=ʎaŋ*
PL-clear.field-EP-AP=SOURCE=LOC3P
‘we finish clearing (the field)’
(021007_2_KandaBelo_AgriculturalYear_005)
- (189) *ɪ-kɔha=a=ʎaŋ =mak*
PL-clean=SOURCE=LOC3P =then

‘we finish cleaning (it)’

(021007_2_KandaBelo_AgriculturalYear_018)

As seen from the English translations, the sentences have similar meanings. They describe a kind of agricultural activity – the clearing of the field. Importantly, both sentences occur in similar discourse environments: in both cases, the implicit object (the field) is not mentioned in the preceding clauses. Yet, in the first case, the verb *táṛò-* is extended by the antipassive morpheme, and the verb *kóhà* is used without the antipassive suffix. It must be noted that the omission of the object with *kóhà* in ex. (189) might be due to its discourse recoverability: the transitive clause with an overt object has the same verb form as in the objectless sentence above:

- (190) *kóhà kùrán*
clean SG.field
‘Clean the field!’
(STA20200205 4)

Likewise, another verb from the same semantic domain, *pàrà* ‘clear the field’, allows antipassivization, yielding the form *pàrààk*. For the lack of an alternative explanation at the moment, we must assume that it is due to its lexical idiosyncrasy that the verb *kóhà* ‘clean the field, weed’ cannot be antipassivized.

Another example that hints at existing lexical restrictions precluding some verbs from participating in the antipassive alternation is the transitive verb *déèk* ‘scoop (water)’. In contrast to the verb *ḡólòk*, with a similar meaning ‘fetch (water)’, which can be antipassivized (*céḡḡólòwàk* ‘3P is scooping (water)’), *déèk* cannot be derived for antipassive; only the transitive usage, i.e. with an obligatory object referring to the second participant, is possible:

- (191) ...*déek-ḡ-aa* *iidi*
scoop-VEN-INS water
‘...to fetch water’
(010207_Jenge_LionHyena)

2.4.5 *-ak / -ak* as an atelicity marker (as an extension of the antipassive function)

One last remark concerning the antipassive marking in Tima pertains to its concomitant atelic reading. The atelic (i.e. unbounded) reading of an antipassive construction is a logical consequence of the object deletion from the transitive base verb. That is, in the underlying transitive construction, the event has as its boundary the resultant (changed) state of the referent of the direct object – the endpoint of the action. When the object is deleted under antipassivization, there is no endpoint in the conceptual structure anymore, and, as a result, the derived event structure is rendered unbounded, i.e. atelic. Consider the two constructions involving the verb *kàbù* ‘dig’:

(192) *àŋ-kàbù-y-í* *kóá*
PERF3-dig-EP-HT SG.hole
‘He has dug a hole.’
(STH20200201 2)

(193) *céŋ-kàbù-y-ák*
IPFV3-dig-EP-AP
‘He is digging.’
(STH20200201 2)

The event structure in (192) has a telic reading due to the presence of the boundary of the event: it includes the result of the digging – the dug-out hole. The antipassive construction in (193) has an unbounded internal event structure; there is no endpoint of the action due to the absence of a direct object that would ‘measure out’ the event, the direct object undergoing change and thus delimiting the event: the event is completed when the effect on the referent of the object is achieved.

In the antipassive counterpart of a given transitive predicate, all the attention is given to the A participant and its involvement in the activity described by the verb, without any implication of the onset or conclusion of the activity. It indeed appears reasonable to suggest that all antipassive constructions attested have a simultaneous atelic reading, due to the absence of the direct object in the argument structure. Polinsky (2017) calls this semantic interplay ‘the antipassive/imperfective correlation’. The imperfective (atelic) reading of antipassive constructions as a recurrent cross-linguistic pattern has been well documented (Hopper and

Thompson 1980; Tchehoff 1987; Cooreman 1994; Dixon 1994; Dowty 1991; Tsunoda 1981). Among the aspectual interpretations of antipassive derivations are non-punctual, incomplete, habitual, iterative, etc. (Cooreman 1994: 57-58; Lazard 1998: 230–231; Polinsky 2017: 315-316).

Aside from the cases of the logical concomitant atelic reading correlating with the antipassive derivation, Tima employs the suffix *-ak* / *-ak* to indicate notions related to atelicity independent of verbal valency. That is, in some cases, we observe a functional split-off whereby the aspectual value of the suffix *-ak* / *-ak* actualizes autonomously without any implication of valency alteration, so that the underlying transitive structure is not affected by the derivation.¹⁰¹ Thus, marked constructions can have durative, iterative, or pluractional (having a plural subject and/or object) readings. In the one instance (so far attested), with the verb *dɔ́yá* ‘steal’, two different constructions with the suffix *-ak* are possible: intransitive antipassive and transitive pluractional. First, consider the intransitive antipassive derivation:

- (194) *kòdáádì* *àn-dɔ́y-á=à=ǎǎ* *dèrdáágà*
 thief PERF3-steal-HT=SOURCE=LOC3P wheelbarrow
 ‘The thief has stolen the wheelbarrow.’
 (STH20190122 1)

- (195) *kòdáádì* *cén-dɔ́y-ák*
 thief IPFV3-steal-AP
 ‘The thief steals (habitually).’
 (STH20190122 1)

The two sentences represent a derivational operation that conforms to the structural definition of the antipassive: the sentence in (195) is a marked counterpart of the base transitive predicate in (194); the meaning of the derived intransitive verb corresponds to the meaning of the base transitive verb; the object of the underlying base is deleted in the derived construction. Yet, as illustrated in (196), the suffix can also be used as a marker of pluractionality with the same verb without reducing the valency of the base predicate:

¹⁰¹ In some languages, due to the antipassive-imperfective correlation, the antipassive marker can even be reinterpreted as a dedicated marker indicating atelicity/imperfectivity and lose its valency-related function altogether (see e.g. Comrie et al. 2015: 552).

- (196) *ihwáà* *àn-dóy-ák=à=ǎǎ* *dòrdáágà*
 people PERF3-steal-AP=SOURCE=LOC3P wheelbarrow
 ‘The people have stolen the wheelbarrow.’
 (STH20190122 1)

Here, the suffix *-ak* is used despite the presence of the direct object, i.e. in this usage, the morpheme is not valency-related anymore but is just a device to indicate the plurality of relations in the designated event. The corresponding telic predicate is marked with the transitivity suffix *-i/-ɪ*, here realized as *-a*: *àn-dóyà-á* (PERF3-steal-HT) *dòrdáágà* ‘3P has stolen the wheelbarrow’.

In Table 44 below, further constructions are shown that employ the suffix *-ak / -ak* for aspectual differentiation without object deletion; with these, the intransitive antipassive is not possible:

Table 44. Atelic verbs with *-ak / -ak*

Verb base	Transitive construction (PERF3-root-EP-HT)	English translation	Pluractional construction (TAM3-root-AP)	English translation
<i>bàrà</i> ‘tear’	<i>àm-bàrà-y-í</i>	3P has torn it	<i>cém-bàràrà-àk¹⁰²</i>	3P is/are tearing it
			<i>àm-bàràrà-àk</i>	3P has torn it at several places/ 3P (PL) have torn it
<i>dá</i> ‘touch’	<i>àn-dá-y-í</i>	3P has touched it	<i>cén-dá-àk</i>	3P (SG) is touching it/ 3P (PL) touch it
			<i>àn-dá-àk</i>	3P has touched it repeatedly/ 3P (PL) has touched it
<i>tórá</i> ‘crack’	<i>àn-tórá-y-í</i>	3P has cracked it	<i>cén-tórárà-àk</i>	3P (SG) is cracking it/3P (PL) crack it
			<i>àn-tórárà-àk</i>	3P (SG) has cracked it in many places/ 3P (PL) have cracked it

¹⁰² The verbs *bàrà* ‘tear’ and *tórá* ‘crack’ form the pluractional forms through the combination of the partial root reduplication and the addition of the suffix *-ak/-ak* to express the atelic reading.

As seen from the English translations in the last column, different interpretations are available depending on the number of participants and the tense-aspect morphology. In contrast to the object-deleting function of *-ak/-ak*, its usage as an atelicity marker does not yield an intransitive structure. The alternation is solely in terms of the aspectual opposition, telic (i.e. punctual, singular, or, generally, bounded) vs. atelic (non-punctual, durative, repetitive, or unbounded); the original object retains its syntactic position after derivation. The following example pairs illustrate this point:

(197) a) *cèn-dà-y-í=dà* *kùηkwáη* *ḡ=còràη*
 PERF1SG-touch-EP-HT=1SG thing INS=stick
 ‘I touched the thing with a stick (once)’
 (Dimmendaal and Schneider-Blum, in prep.)

b) *cèn-dáák-ḡ=dá* *kùηkwáη* *ḡ=còràη*
 PERF1SG-touch:AP-EP=1SG thing INS=stick
 ‘I touched the thing with a stick (repeatedly)’
 (Dimmendaal and Schneider-Blum, in prep.)

(198) a) *cíbóónín* *àm-bàrà-y-í* *cíḡí*
 SG.girl PERF3-tear-EP-HT SG.cloth
 ‘The girl has torn the cloth.’
 (STH20200201 2)

b) *cíbóónín* *cém-bàrà-rà-àk* *cíḡí*
 SG.girl IPFV3-tear:PLUR-AK SG.cloth
 ‘The girl is tearing the cloth.’
 (STH20200201 2)

The lexical meanings of the verbs listed in Table 44 necessitate the overt expression of the direct object (excluding possible omissions due to discourse recoverability). These verbs do not easily allow the activity reading comparable with, e.g., *cénḡàròwàk* ‘3P is engaged in field-clearing’: ‘?(S)he is busy cracking /touching/tearing.’ Most verbs in Table 44 can be described as contact verbs and, consequently, the object of the contact must be expressed.

2.5 Conclusion to Chapter 2

The individual sections of Chapter 2 examined separate functions of the multifunctional suffix *-ak /-ak* in Tima. The three major valency-related functions borne by the suffix are the middle-reflexive, the reciprocal, and the antipassive. From the cross-linguistic perspective, the syncretism of the markers denoting reflexive, reciprocal, and/or antipassive functions is widely documented (see e.g. Terrill 1997; Geniušienė 1987; Kemmer 1993; Nedjalkov 2007b; Polinsky 2017; Sansò 2017: 193; Janic and Witzlack-Makarevich 2021: 10). To explain the functional overlap of these markers, some authors resort to diachronic explanations. Most commonly, the reciprocal function is described as originating from the reflexive function (e.g. Heine 2000; Nedjalkov 2007b). In some languages, the reflexive and reciprocal functions are expressed by distinct morphemes, for example, in Bantu languages; yet even in these cases, it can be argued that the split might be due to diachronic processes, and historically, both functions, reflexive and reciprocal, can still be related to a single common origin (e.g. Maslova 2007; Sansó 2017).

With regard to the antipassive function, Janic (2016), for example, suggests the development of the antipassive meaning from the (original) reflexive function through functional extension. Other sources consider a semantic link between the reciprocal function and the antipassive (see e.g. Dom et al. (2015) and Bostoen et al. (2015), describing such a scenario for Bantu languages;¹⁰³ see Sansó (2017) for a typological perspective). Situation types expressed by reciprocal and antipassive constructions can be related as follows. Reciprocal constructions describe situations where there are minimally two participants bearing A and P roles simultaneously. For example, each participant in the predicate *They hit each other* is an agent (the one who hits) and, at the same time, a patient (the one being hit). On the surface, however, the P role is suppressed, and only the A role is encoded linguistically, so that *They hit each other* can be phrased as *They are involved in hitting*, a situation type akin to the antipassive, that generally describes a situation in which an agentive participant is engaged in some kind of activity.

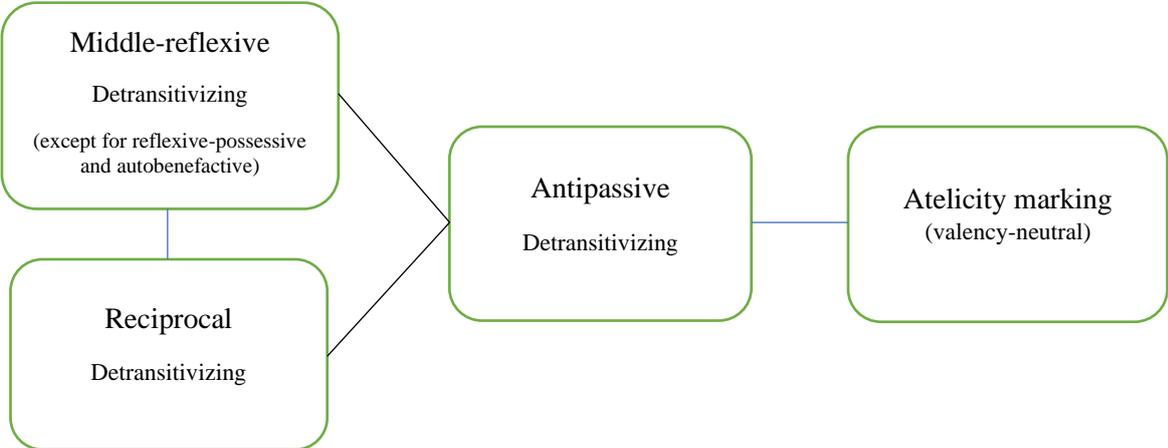
¹⁰³ For instance, the Bantu language Kirundi has separate morphemes for the reflexive (prefix *i-*) and reciprocal (suffix *-an*) functions; there, the syncretism is observed between the reciprocal and the antipassive, not between the reflexive and the antipassive, i.e. for expressing situations corresponding to antipassive construction, the reciprocal suffix *-an* is employed (Janic 2021: 268).

Independent of the existence of historical links that would explain the syncretism of reflexive, reciprocal, and antipassive functions, some authors argue that, from a synchronic point of view, such a syncretic pattern has an obvious conceptual-semantic motivation. For instance, Shibatani (2006: 239) notes: “[...] both the middle and the antipassive relate to the nature of the development of an action. Specifically, both have the ontological feature of an action not (totally) affecting a distinct patient. The conceptual affinity between the two explains the middle/antipassive polysemy seen in a fair number of languages.” This statement correlates with the indistinguishability of participants and events as a definitional property of the middle category postulated by Kemmer (1993).

Likewise, Kulikov (2013: 265) interprets the middle as a cluster of functional types which “[s]emantically, [...] ‘focus’ the activity expressed by the base verb on the first argument (Subject). Syntactically, they usually intransitivize the base verb.” Thus specified, the antipassive can be seen as one of the sub-types of the middle. Another example of approaching the antipassive (treated under the label ‘deobjective’) as belonging to the middle domain is Haspelmath (2003: 224-225), who emphasizes the intransitivizing function of the morpheme common to these distinct usages.

Below, a tentative schematic representation summarizing the attested functions of the suffix *-ak* / *-ak* in Tima is presented that shows its functional scope as inferred from its synchronic distribution across the verbal lexicon:

Figure 12. Semantic map of the multifunctional suffix *-ak* / *-ak*



3. The derivational suffix *-Vk* and its functional distribution through the verbal lexicon

3.1 General remarks

The present chapter explores the functional distribution of the derivational suffix *-Vk* and its correlation with semantic classes of verbs in Tima. Synchronically, this suffix can serve both valency increasing and valency decreasing functions: it functions as a causative morpheme deriving transitive from intransitive verbs, on the one hand, while on the other hand, the suffix *-Vk* is also employed as a detransitivizing morpheme serving such functions as the resultative (3.3.3), the anticausative (3.3.4), and the one-participant middle (3.3.5). Overwhelmingly, the particular function performed by the suffix is compatible with certain semantic groups of verbs that are outlined in the corresponding sections of this chapter. That is, the enumerated functions of the suffix *-Vk* are restricted to particular groups of verbs that share common semantic properties. Only with the resultative function (3.3.3), which is the most productive usage of *-Vk*, are there some minor overlaps where one and the same verb derived for *-Vk* can receive either a causative or resultative reading; yet even in such cases, the language differentiates between the two readings by additional means (see below).

Due to a lack of unequivocal historical evidence, we can only hypothesize as to whether such multifunctionality is a result of the development of one particular meaning from another, i.e. functional extension, or whether we are dealing with the consequence of a (series of) phonological change(s) undergone by initially different (but perhaps formally similar) morphemes resulting in their formal identity synchronically. Dimmendaal (2018: 396-7) provides sound historical and comparative evidence that might indicate the functional extension scenario in the case of the Tima suffix *-Vk*. First of all, the detransitivizing function of *-Vk* in Tima exhibits astonishing functional (as well as formal) similarities with the reflexes of the Proto-Bantu suffix **-ik*, termed ‘impositive’ by Meeussen (1967), in modern Bantu languages.¹⁰⁴ In the latter, the cognate forms of the Proto-Bantu **-ik* are used in detransitivized

¹⁰⁴ Meeussen (1967: 92) distinguishes two formally identical suffixes: **-ik*- impositive (e.g. *-kyk-ik*- ‘put in kneeling position’ and **-ik*- neuter (e.g. *-bón-ik*- (*-bónek-*) ‘be in sight’. Hyman (2007, with reference to Meeussen 1967 and Schadeberg 2003), however, lists under the productive derivational Proto-Bantu verb extensions only one suffix – **-Ik*- ‘neuter/stative’. The reflexes of the latter in the modern Bantu languages are widely discussed

constructions largely subsumed under the term ‘middle’ (see Dom et al. 2016). Yet, in modern Bantu languages, there are different forms of the causative (i.e. valence-increasing) and of valence-reducing functions, in contrast to Tima, where these forms are assumed to be identical. As Dimmendaal (2018: 397) explains, “[t]he corresponding Proto-Bantu causative marker *-icj- would then be the result of increment of the former causative marker [*-j – an archaic causative/transitive suffix (see Hyman 2007); NV] (*-ik-_i > *-icj-), a hypothesis already forwarded by Meinhof apparently but rejected by a number of modern Bantuists (Larry Hyman, personal communication).” Note that, in Tima, the suffix *-i/-I* (a reflex of the archaic form *-j) is still present and functions autonomously as a transitivity marker (see 1.3.4.3.1), whereas in Bantu, this archaic suffix might have merged with the impositive *-ik (according to Dimmendaal 2018), and the resultant form functions as a causative marker (*-ici-). So, despite the present-day discrepancy between what we find in Tima, on the one hand, and in Bantu languages, on the other, we cannot exclude the hypothesis that these modern forms go back to one historical Proto-Bantu source, and that the distinct usages of the Tima suffix *-Vk* might thus display a case of functional extension.

I will say more about the possibility of the functional extension of *-Vk* in the conclusion to this chapter, after all data have been presented, so that it is easier to follow the argumentation.

3.2 The transitivizing function of the suffix *-Vk*

3.2.1 Introductory notes

In this chapter, we scrutinize cases where the suffix *-Vk* is employed in valence-increasing constructions. The major focus will be on the causative derivation (section 3.2.2) and the distribution of the causative function of *-Vk* with regard to the verbal lexicon in Tima. In section 3.2.3, the transitivizing function of the suffix *-Vk* without the underlying causative notion will be briefly introduced for the sake of completeness. The phonetic realization of the

and thoroughly analyzed. Generally, the suffix *-Ik-* ‘neuter/stative’ is attested in all Bantu languages and serves as a detransitivizing morpheme expressing different aspects of the middle category (see Dom et al. 2018 for an overview). I have not found any analyses of the reflexes of the impositive as an autonomous morpheme. Thus, it is not quite clear, as I understand it, whether indeed two functionally distinct (though formally identical) Proto-Bantu morphemes or just one morpheme with specific distributional properties (i.e. depending on the verbal semantics) have to be postulated.

underspecified suffix vowel differs remarkably between these two general functions, i.e., causativization and transitivity marking, and will be explained separately in the respective sections.

3.2.2 Causative

This section mainly focuses on the productively formed causative verbs, i.e. morphological causatives (3.2.2.2). The attested lexicalized causative verbs are considered in section 3.2.2.5. In order to better delineate the borders of the functional scope of the derivational mechanism, periphrastic causative constructions are briefly discussed as well (section 3.2.2.6).

3.2.2.1 Definition and terms

In the following pages the verbs will be investigated that correspond to the following definition given by Kulikov (2011: 386):

Causatives can be defined as verbs which refer to a causative situation, i.e. to a causal relation between two events, one of which is believed by the speaker to be caused by the other. [...] In other words, a causative is a verb or verbal construction meaning ‘cause to V_o’, ‘makeV_o’ (where V_o stands for the embedded base verb). Thus, the causative derivation adds the meaning ‘cause’ to the base proposition and a new actor, viz. Causer, to the set of semantic roles. The causer obligatorily takes the Subject position, ousting the initial Subject to a non-Subject (non-S) position.

From the morphosyntactic point of view, causativization is usually understood as a morphologically signaled operation whereby a new argument – an external Causer – is introduced into the underlying argument structure, thus increasing the valency by one (see, e.g., Comrie 1975: 2; Dixon and Aikhenvald 2000: 13). The introduction of an argument results in rendering an underlying intransitive clause transitive and an underlying transitive ditransitive. The latter possibility depends on whether the language allows the causativization of transitive predicates. As will be shown below, this is not the case for Tima; only intransitive verbs can serve as bases for regular causative derivation.

As a result of the derivation, the argument structure is reorganized: the original subject moves into the direct object syntactic position, and the newly introduced agent (the causer) now occupies the subject position. Consider the following example pair for an illustration:

- (199) *kìcimbárí* *àn-dìyánà*
 child PERF3-laugh

‘The child has laughed.’

(STH20200101 4)

(200) *wórṣmáádṣh àn-dìyáni-ìk¹⁰⁵ k̀cimbárí*

man PERF3-laugh-CAUS child

‘The man made the child laugh.’

(STH20200101 4)

The underlying intransitive predicate in (199) has *k̀cimbárí* ‘child’ as its sole core argument in the subject position. The derived causative construction in (200) has a transitive structure: the new causer argument, *wórṣmáádṣh* ‘man’, now occupies the subject syntactic position and the original subject moves into the postverbal direct object position. The operation is morphologically signaled through the extension of the verb with the suffix *-Vk*, realized in (199) as *-ìk* in the derived verb form. Correspondingly, the causative construction exemplified in (200) is called a morphological causative. Conventionally, two other types of causative construction are differentiated in the literature (e.g. Comrie 1989: 160-163; Kulikov 2001: 886-887, among many others): i) lexical causatives, i.e. plain (underived) transitive verbs bearing causative semantics in their lexical meaning, and ii) periphrastic (also called syntactic or analytic) causative constructions where the causative meaning is construed by a compound syntactic structure. Across languages, we observe a strong correlation between lexical causative verbs and direct causation. Periphrastic constructions, on the other hand, may express both direct and indirect causation. Morphological causatives are considered to tendentially express direct causation on a par with pure lexical causative verbs (e.g. Levin and Rappaport Hovav 1995; Pinker 1989; Shibatani 1976; Song and Wolff 2005; Wierzbicka 1988; Wolff 2003). Generally, direct causation implies physical manipulation and a complete spatio-temporal overlap between the causing and caused events so that it is impossible to conceptually divide the causal chain into an explicit initial causing action and the resulting caused state. Indirect causation, by contrast, allows a clear separation of the two events, linguistically reflected in the bi-clausal structure. The label ‘indirect causation’ means that the causal event is effected not by direct manipulation but indirectly, through giving an order, for example, or through an intermediate action, e.g. melting ice by leaving it in the sun.

¹⁰⁵ See 3.2.2.3 on the root-final vowel assimilation under causativization.

In Tima, all three strategies are available: lexical, morphological, and periphrastic causatives. The main concern in the present analysis will be with morphological causatives in terms of their distribution across the verb lexicon. Lexical causatives will be dealt with in sections 3.3.3, 3.3.4, and 3.3.5, discussing the resultative, the anticausative, and the middle of the suffix *-Vk*, respectively; there, lexical causatives represent the transitive counterpart of the named alternations. A brief account of periphrastic causative constructions is given in section 3.2.2.6 to better delineate the functional scope of the morphological strategy of causativization.

The two participants of a causative event are the Causer and the Causee, each exhibiting specific properties. The Causer can be described as an agentive participant; the most prominent feature ascribed to a Causer is [+control]. Accordingly, the Causer is construed as a participant initiating the event designated by the verb and, thus, starting the causal chain – causally linked and temporally ordered actions. The Causee is construed as an affected participant whose affectedness can be defined in terms of a change of state brought about by the Causer’s action. This complex conceptual structure motivates the description of causatives as a two-event construction, consisting of the causing action performed by the Causer (causing event) and the resultant state acquired by the Causee (caused event). Alexiadou et al. (2015: 1), for example, suggest, based on the presupposition of two events, that the causative alternation is a voice alternation: both transitive (causative) and intransitive (anticausative) counterparts have a causative semantic component, but the causative alternation adds an additional structural layer introducing an external argument; anticausative simply lacks this layer. Dixon (2000: 30) has a different take on the structure of a (morphological) causative construction: “[A] causative construction involves the specification of an additional argument, a causer, onto a basic clause. A causer refers to someone or something (which can be an event or state) that initiates or controls the activity.” This latter interpretation is less challenging than the two-event characterization of a morphological causative construction since it just describes causatives as a special type of transitive clause and does not require any linguistic evidence for the existence of two underlying subevents that can be represented as distinct predicates at some (abstract) level. (Of course, it may be useful to do this for individual languages. In Tima, however, we do not observe any linguistic reflection of two subevents encoded in morphological causatives.)

3.2.2.2 Morphological causatives

This section deals only with productively derived causative verbs corresponding to the definition at the beginning of section 3.2.2.1. Lexicalized causative verbs will be presented separately in section 3.2.2.5. The next table shows the attested morphological causative verbs in Tima derived by means of the suffix *-Vk*.

Table 45. Morphological causative verbs in Tima

Causative verb (root-(EP)-CAUS)	English translation	Base form	Gloss
<i>kìmání-ìk</i>	satiate	<i>kìmání</i>	be satiated
<i>kùlí-ìk</i>	frighten	<i>kùlí</i>	fear, be afraid
<i>díyàni-ìk</i>	make laugh	<i>díyàná</i>	laugh
<i>wòdání-ìk</i>	make cry	<i>wòdánà</i>	cry
<i>bìlṭ-ìk</i>	impregnate	<i>bìlà</i>	be(come) pregnant
<i>pònṭ-ìk</i>	quieten, calm down (trans.)	<i>pònó</i>	be quiet, calm down
<i>ṭólónṭ-ìk</i>	surprise	not attested	*be startled, surprised
<i>tálln-ìk</i>	boil (trans.)	<i>tálln</i>	boil
<i>díṭ-ìk</i>	help walk, lead by the hand	<i>dí</i>	walk
<i>dòwá-y-ìk</i>	help go down, put down	<i>dòwá</i>	descend, start off
<i>kṣṭi-ìk</i>	lay down	<i>kṣṭi</i>	lie down
<i>ṭìmi-ìk</i>	let go, leave out (pluractional)	<i>ṭìmi</i>	leave (PLUR)
<i>kàràṭ-ìk</i>	let go, distribute	<i>kàràṭ</i>	leave
<i>tùli-y-ìk</i>	let go, distribute (pluractional)	<i>tùli</i>	leave (PLUR)
<i>(c)íy-ìk</i>	put inside, insert	<i>(c)íy</i>	enter
<i>(k)àwóni-ìk</i>	move it	<i>(k)àwòn</i>	move
<i>(k)állì-ìk</i>	feed	<i>(k)állà-àk</i>	eat
<i>(k)áy-ìk</i>	breastfeed	<i>(k)áy-àk</i>	suckle
<i>ṭólì-ìk</i>	make agree/gather	<i>ṭólì-y-àk</i>	agree, come together
<i>díṅá-y-ìk</i> (telic)	help climb	<i>díṅé</i>	climb
<i>díṅé-èk</i> (atelic)	help climb		

<i>dó-y-ik/dó-y-òk</i> ¹⁰⁶ (telic) <i>dòwé-èk</i> (atelic)	wake up, raise, start (motor)	<i>dó</i>	stand (up)
<i>hòdòntì-ik</i> (telic) <i>hò(n)dànì-ik</i> (atelic)	seat	<i>hò(n)dònò/ hò(n)dànà</i> ¹⁰⁷	sit
<i>kàṭṭí-ik</i> (telic) <i>kàṭṭ-ùk</i> (atelic)	make sleep, bring to bed	<i>kàṭṭù</i>	sleep, lie down
<i>pìṛí-ik</i> (telic) <i>pìṛí-ik</i> (atelic)	set free, lose	<i>pìṛí-ṭ-àk</i>	flee, get free
<i>wùdà-y-ik</i> (telic) <i>wùdè-èk</i> (atelic)	burn (trans.)	<i>wùdà</i>	burn
<i>cilàwàṭ-èk</i>	make tired/exhaust	<i>cilàwò</i>	be tired/exhausted
<i>hòwànt-èk</i>	empty/dry (trans.)	<i>hòwàrà</i>	be dry
<i>(k)áár-èk</i>	grow it	<i>(k)áár-àk</i>	grow (middle)
<i>(k)áṭám-òk</i>	let go, leave out (single action)	<i>(k)áṭám</i>	leave, go out
<i>kúún-ùk</i>	help deliver	<i>kúún</i>	deliver, give birth
<i>mók-òk</i>	give to drink	<i>mók-òk</i>	drink
<i>rèè-ṭ-òk</i>	weigh, make even	<i>rèè</i>	be similar, even
<i>ṭódóṭ-òk</i>	scare	<i>ṭódó-òk</i>	be scared

Before moving to the explanation of the phonetic realization of the suffix vowel in 3.2.2.3 and the semantic properties of derived causative constructions in relation to their bases in 3.2.2.4, some clarifications should be given with regard to the verb forms in Table 45.

The first remark is on the alternative causative verb forms in the first column, where the first form expresses a telic (i.e. non-pluractional) eventuality and the second form is used in atelic (pluractional) constructions (see 1.3.4.4 on pluractionality in Tima). This pattern, i.e., telic/atelic form alternation is not regular and occurs with only six verbs listed in Table 45; the phonetic properties of these alternative forms are discussed below in 3.2.2.3. With other verbs, just one causative form is available that is used in both telic and atelic constructions.

¹⁰⁶ The two forms *dóy-ik* and *dóy-òk* ‘wake up, raise, start (the motor)’ represent two variants that are equally possible without any meaning difference, according to the Tima speakers who provided the examples.

¹⁰⁷ The parenthesized *-n-* indicates that both variants, i.e. with and without *-n-*, are equally acceptable.

The second note is on the form of the base verbs in the third column. The majority of causative verbs have an underived intransitive base verb. One exception is the causative verb *hówànt̀̀̀̀k* ‘empty’. The base form *hówàn* belongs to the category of adjectives (see 1.3.3 on the properties of noun phrases in Tima). That is, in this particular case, the causativization involves word class change, comparable to the formation of causative verbs in English (e.g. *red – redder*). A further peculiarity of the causative form *hówànt̀̀̀̀k* ‘empty, dry (trans.)’ is that it represents one of the rare labile verbal forms in Tima, meaning that one and the same form expresses two different meanings associated with a transitive and intransitive structure (see 3.2.2.5 below on other attested labile forms). In the case of *hówànt̀̀̀̀k*, the non-causal (labile) counterpart is used in patient-oriented intransitive constructions (intransitive S = transitive O) and conveys the resultative meaning (see 3.3.3 on resultative constructions):

- (201) *píná* *à-hówànt̀̀̀̀k* *tóòr*
 PRON3SG PERF3-empty-CAUS pot
 ‘(S)he emptied the pot.’
 (Dimmendaal and Schneider-Blum, in prep.)

- (202) *tóòr* *à-hówànt̀̀̀̀k*
 pot PERF3-empty-RES
 ‘The pot has been emptied.’
 (Dimmendaal and Schneider-Blum, in prep.)

The lexeme *réè* ‘be similar, even’, in contrast, belongs to a verbal category in Tima even though the English translation invites an adjectival interpretation:

- (20) *yóò* *láání* *cê-réè*
 walking 2PL.POSS IPFV3-be.similar
 ‘Your ways of walking are similar.’
 (07.04.09_17-21.wav)

The verb *réè* ‘be similar, even’ is generally used in contexts of comparison, often between individuals. The derived causative construction, however, is applicable only to inanimate Causees:

- (204) *a-rɛɛt-ɔk=a=tan* *rɛʔɛy*¹⁰⁸
 2SG-weigh- equal
 CAUS=SOURCE=LOC3P
 ‘you put them on the same level/ evenly...
 (040310_04_Hasabu_Granary)

While the overwhelming majority of causative verbs have an intransitive base, some of the verbs (seven out of 33) have what has been defined as precategory roots, i.e. valency-neutral roots that can be used in clauses only after derivation.¹⁰⁹ In Table 45, these verbs are given in the derived intransitive form, which is the only possible alternation to the causative (i.e. transitive) form. In all but one case the intransitive counterpart is derived for the multifunctional suffix *-ak/-ak*, bearing one-participant middle functions (see 2.2.2) with the verbs *(k)álà-àk* ‘eat’, *(k)áy-àk* ‘suck (milk)’, *mó-àk* ‘drink’, *pìtít-àk* ‘flee, get free’, *(k)áár-àk* ‘grow’, and the reciprocal function (see 2.3) with *tólíy-àk* ‘agree’. One verb has an anticausative intransitive alternant – *tódó-àk* ‘be scared’ (see 3.3.4 on the anticausative function of the suffix *-Vk*). The example pair below illustrates the alternation between the semantically related transitive/intransitive verb forms that can both be derived from the same verbal root. The sentence in (205) demonstrates the intransitive predicate derived from the root *káár* ‘grow’ by means of the detransitivizing suffix *-ak* (here with the middle/reflexive function; see 2.2.2.6). Example (206) shows the transitive predicate with the same root *káár* extended with the suffix *-ɔk* to yield a causative reading:

- (205) *cíbi* *àŋ-káár-àk*
 tree PERF3-grow-MID/REFL
 ‘The tree has grown.’
 (Dimmendaal and Schneider-Blum, in prep.)

¹⁰⁸ Note that the adverb *rɛʔɛy* ‘equal’ is semantically related to *rɛɛ* ‘be similar’.

¹⁰⁹ Aside from morphologically related causal/non-causal verb alternations, in some languages, suppletive verb pairs exist that express causal/non-causal relations. In Tima, only one suppletive pair has been attested: *tòmò* ‘kill’ (causative) vs. *búlúk* ‘die’. Haspelmath (1993: 106) mentions that in 16 out of 21 sample languages, the meanings ‘die’ and ‘kill’ are expressed by different lexemes (i.e. constitute a suppletive relationship). The author ascribes this distribution (“the luxury” of having two separate verbs for related meanings) to “the enormous social and moral significance of the difference between spontaneous dying and intentional killing.” However, as noted by Dixon (2000: 39), it is important to clearly define the criteria for linking such pairs of verbs. Here, only their semantic correspondence, as reflected in the translation, is considered.

- (206) *áár-ə̀k* *cìbí*
 grow-CAUS tree
 ‘Grow a tree!’
 (Dimmendaal and Schneider-Blum, in prep.)

3.2.2.3 Phonetic realization of the causative suffix

The phonetic realization of the causative suffix is represented as *-Vk* in the existing analyses of different linguistic aspects of Tima (references given elsewhere in the present study). The capital *V* indicates that the vowel quality of the suffix varies across the attested causative verbs. Based on the distribution of the causative verbs examined for the present analysis, it seems reasonable to assume that the underlying form of the suffix marking (prototypical) causative predicates is *-ik / -ɪk*, i.e. with a high frontal vowel: 27 out of 33 attested causative verbs exhibit this pattern. The assumed base form with the high front suffix vowel *-ik / -ɪk* conforms to the hypothesis that the causative morpheme in Tima corresponds to the the Proto-Bantu causative marker **-icɪ* (Dimmendaal 2018: 397). The low tonal pattern of the suffix is constant across all attested instances. The ATR (advanced tongue root) feature specification is determined by the corresponding value of the preceding root vowel. That is, when the preceding vowel is [-ATR], the suffix vowel assimilates to this value, producing the causative suffix *-ɪk*; when the preceding root vowel is [+ATR], the suffix is *-ik*. Compare the following example pairs for an illustration:

- (207) *cíbá* *àŋ-wódáná*
 child PERF3-cry
 ‘The child has cried.’
 (STA20200205 1)
- (208) *wàyén* *àŋ-wòdání-ìk* *cíbá*
 father PERF3-cry-CAUS child
 ‘The father made the child cry.’
 (STA20200205 1)

(209) *áη-káṭù* *n=ááyà*
 PERF3-lie.down INS=sleep
 ‘(S)he has/they have fallen asleep.’
 (15.03.10_02_10.wav)

(210) *wéèñ* *áη-káṭì-ìk* *éibá*
 mother PERF3-lie.down-CAUS child
 ‘The mother made the child sleep,’
 (STA20200210)

In (208), the vowel of the suffix is realized as [-ATR], corresponding to the value of the preceding root vowel of the base verb represented in (207). In (210), on the contrary, the suffix vowel acquires [+ATR] specification, harmonizing with the root vowel of the base verb in (209).

Also apparent from the comparison of the examples (207) vs. (208) and (209) vs. (210) is that the vowel quality of the causative suffix may influence the realization of the root final vowel in that the latter assimilates to the [+front, +high] value of the causative suffix. The underlying intransitive verb *wòdàná* ‘cry’ in (207) has the final vowel *a* and *káṭù* ‘sleep, lie (down)’ ends with *u*. However, when causativized, the root-final vowels change to *ɪ / i*, respectively.

Eight verbs (out of 33) in Table 45 have a suffix form different from the assumed basic *-ik / -ik:*

<i>kúuñ-ùk</i>	‘help deliver’
<i>mók-òk</i>	‘give to drink’
<i>réèṭ-òk</i>	‘weigh, make even’
<i>ṭódóṭ-òk</i>	‘scare’
<i>(k)àṭám-òk</i>	‘let go, leave out’ (single action)
<i>cíláwàṭ-èk</i>	‘make tired/exhaust’
<i>hówàñṭ-èk</i>	‘empty/dry’
<i>(k)áár-èk</i>	‘grow it’

The above verbs exhibit assimilation of the suffix vowel to the final vowel of the root. Six of the verbs have the [-front] suffix vowel *u/ɔ*, yielding the suffix *-uk/-òk* when the preceding

vowel is likewise [-front]. The last three verbs have the central vowel ə in the suffix. Bashir (2010: ch. 4, section 4.2.3) describes this assimilation in terms of the optimization process observed primarily with younger speakers: “In this regard, it is obvious that Tima young speakers tend to optimize the vowel harmony system in the language, i.e. they use a centralized version for the vowel of the affix [...] whenever the root/stem vowel is a central vowel.” Even though the attested cases illustrating the optimization process are not as numerous, they may still be indicative of an ongoing linguistic change.

As alluded to earlier, six causative verbs in Table 45 exhibit a formal contrast in the realization of the causative suffix depending on whether the predicate is construed as telic (i.e. non-pluractional) or atelic (pluractional). Whereas in telic constructions the suffix has its (assumed) basic form, i.e. *-ik / -ik*, atelic causative forms show mutual assimilation of the root-final and suffix vowels. The comparison of different forms of the verb *wùdál* ‘burn (intransitive)’ demonstrates the contrast. Example (211), first, shows the basic intransitive verb form; examples (212) and (213) illustrate telic and atelic (pluractional) causative derivations, respectively:

(211) *ílóm céη-wùdál*
 garbage IPFV3-burn
 ‘The garbage is burning.’
 (STA20200212 1)

(212) *cìhí àη-wùdál-y-ik kùrtú*
 fire PERF3-burn-HT-CAUS house
 ‘The fire has burnt the house.’
 (STH20200201 2)

(213) *ihwáá àη-wùdé-èk=à=ṭáη idèk*
 people PERF3-burn-CAUS PL.neck
 =SOURCE=LOC3P
 ‘The people have burnt themselves.’
 (STH20200209 3)

Assumedly, the formal difference results from the presence of the high transitivity marker *-i / -i*, realized as the glide *y* in (212); see 1.3.4.3.1 on the transitivity marker. Example (211) shows

that the basic root form of the verb is *wùdà*; the root-final *-à* is preserved in the telic construction in (212), due to the presence of the transitivity marker *-y-* (here indicating the telicity of the event) intervening between the root and the causative suffix. In the atelic construction in (213), by contrast, mutual assimilation of the root-final vowel and the suffix vowel occurs due to their adjacent positions, resulting in the long *-ee-*.

The next table presents all the cases attested (so far) of the formal distinction in causative marking correlating with the telic vs. atelic opposition.

Table 46. Telic vs. atelic causative verb forms

Telic causative verb	English translation	Atelic causative verb	English translation
<i>díḡá-y-ìk</i> climb-HT-CAUS	Help him climb!	<i>díḡé-èk</i> climb-CAUS	Help them climb!
<i>àn-dó-y-ìk k̀cìmbárí</i> <i>tòḡáḡ</i> PERF3-stand-HT-CAUS SG.child above	3P has lifted the child up	<i>àn-dó-èk ìbárímbárí</i> PERF3-stand-CAUS PL.child	3P has lifted the children up
<i>àḡ-kàḡtì-y-ìk cìbà</i> PERF3-lie.down-HT-CAUS SG.child	3P brought the child to bed	<i>àḡ-kàḡt-ùk ìbà</i> PERF3-lie.down-CAUS PL.child	3P brought the children to bed
<i>dó-y-ìk</i> raise-HT-CAUS	Wake him up!	<i>dówé-èk</i> raise-CAUS	Wake them up!
<i>wùdà-y-ìk</i> burn-HT-CAUS	Burn it! (single action)	<i>wùdè-èk</i> burn-CAUS	Burn it! (multiple/continuous actions)

Now that major formal properties of the causative derivation have been outlined, we can proceed to the semantic aspects of this process in Tima.

3.2.2.4 Semantic aspects of the causative derivation

This section is primarily concerned with the semantic properties of the base verbs participating in the causative alternation in Tima. The verbs participating in the causative alternation will be investigated in terms of their lexical semantics as well as in terms of the semantic features of

the participants entailed by (or compatible with) the base verbs. Likewise, we shall look at the semantic relations between the underlying non-causal predicates and their derived causative counterparts.

The attested morphological causatives (see Table 45 above) have as their intransitive counterparts verbs that can be subdivided into three groups: i) verbs describing states and processes, ii) body motion/posture verbs, and iii) ingestive verbs. In what follows, these subgroups will be examined in the given order.

3.2.2.4.1 Morphological causatives derived from verbs denoting states and inactive processes

The following causative verbs have as their intransitive counterparts verbs designating states or inactive processes:

Table 47. Causatives derived from verbs denoting states and processes

Verbs denoting states as bases			
<i>cíláwàt-òk</i>	make tired/exhaust	<i>cíláwó</i>	be tired/exhausted
<i>kímání-ìk</i>	satiate	<i>kímáná</i>	be satiated
<i>kúlí-ìk</i>	frighten	<i>kúlí</i>	fear, be afraid
<i>bìlì-ìk</i>	impregnate	<i>bìlà</i>	be pregnant
<i>pònṅ-ìk</i>	quieten, calm down (trans.)	<i>pònó</i>	be quiet, calm down
<i>ṭódó-ṭ-òk</i>	scare	<i>ṭódó-òk</i>	be scared
<i>réèṭ-òk</i>	weigh, make even	<i>rée</i>	be similar, even
<i>tólí-ìk</i>	make agree	<i>ṭólíy-àk</i>	agree, be in agreement
<i>ṭólónṭ-ìk</i>	surprise	not attested	*be startled, surprised
<i>hówàṅ-òk</i>	empty/dry (trans.)	<i>hówàná</i>	be dry
Verbs denoting processes as bases			
<i>kúuñ-ùk</i>	help deliver	<i>kúún</i>	deliver, give birth
<i>dìyàní-ìk</i>	make laugh	<i>dìyàná</i>	laugh
<i>wòdàní-ìk</i>	make cry	<i>wòdàná</i>	cry

<i>tálln-ik</i>	boil (trans.)	<i>tálln</i> ¹¹⁰	boil
<i>wùdà-y-ik</i> (telic)	burn (trans.)	<i>wùdà</i>	burn
<i>wùdè-èk</i> (atelic)			

Consider, for illustration, the following alternations involving the base verbs denoting states (as in the pair (214) and (215)), as well as inactive processes (ex. (216) and (217)):

(214) *àη-kìmλη=à=ṭáy=dλ*

PERF3-be.satiated=SOURCE=LOC3P=1SG

‘I am satiated.’

(STA20200208 1)

(215) *kábóh àη-kìmλn-ik=à=ṭáy=dλ*

meat PERF3-be.satiated= SOURCE=LOC3P=1SG

‘The meat has satiated me.’

(STA20200208 1)

(216) *Háámít àn-cilàwà=à=ṭáy*

Hamid PERF3-be.tired=SOURCE=LOC3P

‘Hamid is tired.’

(STH20200211 5)

(217) *ηòγάη àn-cilàwàṭ-ḡk=à=ṭáy-ə=dá*

work PERF3-be.tired-CAUS=SOURCE=LOC3P-EP=1SG

‘The work exhausted me.’

¹¹⁰ The verb *tálln* ‘boil’ is a process verb normally compatible with a patientive underlying subject, e.g. water, making it a suitable case for morphological causativization. The causative verb *tállnik* ‘boil (trans.)’ just adds an Actor argument to the conceptual event structure. Yet *tálln* ‘boil’ is also used in an idiomatic expression with animate (primarily human) subjects, with the meaning ‘run’:

iwòrmáádsh àn-tálln

PL.man PERF3-boil

‘The men have run/ been running.’

In the usage illustrated above, the verb *tálln* cannot be causativized, i.e. it is not possible to express the causative meaning ‘make someone run’ using this verb; only the literal meaning is eligible for the causative derivation.

The main property of the predicates based on verbs expressing states and inactive processes is that their main core participant, i.e. the underlying subject, bears a patientive (or Undergoer) thematic role related to the lexical meaning of the verb. Characteristic of the underlying subject of these verbs is a low degree of agency, since this participant does not instigate the event. The verb describes what happens to the subject referent, i.e. a further characterizing property is the affectedness of the participant. That is, the underlying subject can be described as [\pm VOL, -INST, +AFF] (see 1.2.2.3 for the feature decomposition approach to thematic roles of arguments; recall from there that +VOL intends to reflect the fact that the corresponding participant is sentient but not necessarily a volitional instigator of the event). Consequently, the verbs characterized by a patientive sole argument are called inactive. The relevance for the grammar of the differentiation of the two types of intransitive verbs – inactive (states and processes) and active – has been famously established by Perlmutter (1978), who labeled the two subtypes unaccusative and unergative intransitive verbs, corresponding largely to inactive and active verbs, respectively. The terms unergative and unaccusative were originally introduced as a syntactic notion (Perlmutter 1987); however, due to the specific correlations of these syntactic patterns with particular semantic features, they came to be used as semantic categories as well, roughly corresponding to active and inactive intransitives (e.g., Levin and Rappaport Hovav 1995; Haspelmath 2016). The main difference between the active (or agentive, unergative) intransitive verbs, on the one hand, and inactive (or patientive, unaccusative) intransitive verbs, on the other, pertains to the thematic relations of the intransitive subjects: with inactive verbs, the subject has a Patient underlying semantic relationship to the verb. In the terminology of RRG, the surface intransitive subject is an underlying, i.e. semantic, (direct) object. That is why inactive (or unaccusative) intransitive verbs readily undergo the causativization process: since the causative derivation adds a new agentive participant (the Causer), the underlying subject, the Causee in the derived predicate, should be preferably patientive so that the agent role in the underlying conceptual structure of the base event is available, i.e. not performed already by the core participant of the base intransitive verb (in accordance with the requirement for one instance of the same category (agent) in the same predicate). The following illustration is an attempt to represent the conceptual structure of the base and derived predicates in order to demonstrate their relationship to each other:

(218) *cíbá àŋ-wódàná* (repeated)

child PERF3-cry

‘The child has cried.’

Subj_{PATIENT} [+VOL, -INST, +AFF] pred [inactive process]

(219) *píná àŋ-wódàni-ìk cíbá*

PRON3SG PERF3-cry-CAUS child

‘(S)he made the child cry.’

Subj_{CAUSER} pred[inact. process+CAUS] object_{CAUSEE=PATIENT} [+VOL, -INST, +AFF]

The feature specification of the sole participant in the intransitive event in (218) exactly corresponds to that of the direct object in the derived causative construction in (219). The derivational suffix *-ìk* adds the meaning component ‘cause’, which is linked to the newly introduced argument in the subject position.¹¹¹ The Causee is characterized as -Instigating, +Affected (i.e. corresponding to a prototypical Patient) in its conceptual makeup in both intransitive and transitive (causative) predicates. Kittilä (2013: 113) calls the causatives from inactive intransitive verbs agent-related. In his own words, “[i]n agent-related causation, the original clause involves no agent and the agent introduction is thus complete [...]” Shibatani (2002: 6) similarly notes that “causativization of inactive [i.e. patientive; NV] intransitives is ‘easier’ because the agent introduced by causativization can just fill the vacant agent slot in the argument structure.” Due to the semantic profile of the inactive verbs described, they are dispreferred or, with some verbs, even unacceptable in most cases for periphrastic causative formation (e.g. *She made me be tired/satiated, etc.) since periphrastic constructions usually have two agentive participants (see 3.2.2.6 below).

Before moving to the next semantic group, one last remark should be made on the nature of the main participants of the causative events (the Causer and Causee) denoted by the attested verbs. For convenience, the verbs are listed again below, with additional columns commenting on the properties of the Causer and Causee:

¹¹¹ I use ‘link’ in a theory-neutral sense to describe the association of predicate meaning components with arguments.

Table 48. The nature of the Causer and Causee with morphological causatives based on verbs denoting states and processes

Causative verb	English gloss	Causer	Causee	Intransitive base	English gloss	Subject
<i>cilàwàṭ-ḡk</i>	make tired/exhaust	±anim	+anim	<i>cilàwò</i>	be tired/exhausted	+anim
<i>kímànì-ìk</i>	satiate	-anim	+anim	<i>kímànà</i>	be satiated	+anim
<i>kùlì-ìk</i>	frighten	±anim	+anim	<i>kùlì</i>	fear, be afraid	+anim
<i>bilṭ-ìk</i>	impregnate	+anim	+anim	<i>bilá</i>	be pregnant	+anim
<i>pónṭ-ìk</i>	quieten, calm down (trans.)	±anim	+anim	<i>pónó</i>	be quiet, calm down	+anim
<i>ṭòḡṭ-òk</i>	scare	±anim	+anim	<i>ṭòḡ-òk</i>	be scared	+anim
<i>ṭóḷ-ìk</i>	make agree	±anim	+anim	<i>ṭóḷ-y-àk</i>	agree, be in agreement	+anim
<i>ṭòlónṭ-ìk</i>	surprise	±anim	+anim	not attested	*be startled, surprised	
<i>kúún-ùk</i>	help deliver	+anim	+anim	<i>kúún</i>	deliver, give birth	+anim
<i>dìyànì-ìk</i>	make laugh	±anim	+anim	<i>dìyànà</i>	laugh	+anim
<i>wòḡàní-ìk</i>	make cry	±anim	+anim	<i>wòḡànà</i>	cry	+anim
<i>hòwàṅṭ-ḡk</i>	empty/dry (trans.)	±anim	±anim	<i>hòwàná</i>	be dry	±anim
<i>rééṭ-òk</i>	weigh, make even	+anim	-anim	<i>réé</i>	be similar, even	±anim
<i>tálàn-ìk</i>	boil (trans.)	±anim	-anim	<i>tálàn</i>	boil	-anim
<i>wùḡá-y-ìk</i> (telic)	burn (trans.)	±anim	-anim	<i>wùḡá</i>	burn	-anim

As can be seen from the table above, the majority of the causative verbs in the leftmost column (ten out of 14) have animate Causees; with the verb *hòwàṅṭḡk* ‘empty, dry’ both animate and inanimate Causees are possible (animate, e.g. when referring to a child being dried with a towel by her mother). We can also observe that the nature of the Causee in terms of animacy is consistent between the base and the derived construction, the only exception being the verb *rééṭòk* ‘weigh, make even’, which allows only inanimate Causees, while the corresponding intransitive subject argument may be [±anim].

The Causer, by contrast, can nearly always be both animate and inanimate with the verbs listed in Table 48, pragmatic adequacy being the sole criterion to be considered. For example:

(220) *wáyèn àn-díyáni-ìk k̀̀c̀̀ímbárí*
 father PERF3-laugh-CAUS child
 ‘The father made the child laugh.’
 (SHT20200201 4)

(221) *t̀̀ámáá k̀̀m̀̀àl àn-díyáni-ìk k̀̀̀c̀̀ímbárí*
 speech good PERF3-laugh-CAUS child
 ‘The funny story made the child laugh.’
 (20.09.07-39.wav)

Both (220) with an animate Causer and (221) with an inanimate Causer are perfectly good propositions. That is, with this subgroup of causative verbs, there is no strict requirement for the Causer to be a prototypical Agent, i.e. a willful participant who instigates the event leading to the affectedness of the Causer.

Only in one case, with *k̀̀m̀̀l̀̀ǹ̀ik* ‘satisfy’, is the Causer argument exclusively inanimate; with three verbs (*b̀̀l̀̀t̀̀ik* ‘impregnate’, *k̀̀úú̀ǹ̀uk* ‘help deliver’, and *r̀̀éé̀t̀̀òk* ‘weigh, make even’)¹¹², only animate Causers are pragmatically possible.

3.2.2.4.2 Morphological causatives derived from verbs of body motion/posture

The table below shows the attested causative verbs with intransitive counterparts denoting body motion/posture. The table contains columns indicating the nature of the Causer, the Causee, and the underlying intransitive subject argument.

Table 49. Causative verbs derived from intransitive body motion/posture verbs

Causative verb	English gloss	Causer	Causee	Intransitive counterpart	English gloss	Subject argument
Positional base verbs						
<i>d̀̀ó-y-ìk/d̀̀ó-y-òk</i> (telic)	wake up, raise, start (motor)	+anim	±anim	<i>d̀̀ó</i>	stand (up)	+anim

¹¹² Possibly, with the sense ‘make even’, a natural force can also be a Causer (e.g. the rain made the field even); unfortunately, I don’t have (negative) evidence for this case.

<i>dòwê-èk</i> (atelic)						
<i>kàtì-ik</i> (telic)	make sleep,	+anim	±anim	<i>kàtù</i>	sleep, lie	±anim
<i>kàt-ùk</i> (atelic)	bring to bed				(down)	
<i>kèti-ik</i>	lean (trans.)	+anim	±anim	<i>kèti</i>	lean	±anim
<i>hə(n)dənɔ́-ik</i> (telic)	seat	+anim	+anim	<i>hə(n)dənɔ́/</i> <i>hə(n)dàná¹¹³</i>	sit	+anim
<i>hə(n)dàní-ik</i> (atelic)						
Motion base verbs						
<i>dít-ik</i>	help walk, lead by the hand	+anim	+anim	<i>dí</i>	walk	+anim
<i>dìjá-y-ik</i> (telic)	help climb	+anim	+anim	<i>dìjé</i>	climb	+anim
<i>dìjé-èk</i> (atelic)						
<i>dòwá-y-ik</i>	help go down, put down	+anim	±anim	<i>dòwá</i>	descend, start off	+anim
<i>(k)átám-òk</i>	let go, contribute (single action)	+anim	±anim	<i>(k)átám</i>	leave, go out	+anim
<i>àŋ-kàràrì-ik</i>	let go, distribute	+anim	±anim	<i>kàràr</i>	leave	+anim
<i>ǫ́mí-ik</i>	leave out (pluractional)	+anim	±anim	<i>ǫ́mí</i>	leave (PLUR)	+anim
<i>túli-y-ik</i>	let go, distribute (pluractional)	+anim	±anim	<i>túli</i>	leave (PLUR)	+anim
<i>pìrìt-ik</i> (telic)	set free, lose	+anim	±anim	<i>pìrìt-àk</i>	flee, get free	+anim
<i>pìrì-ik</i> (atelic)						
<i>(k)àwòní-ik</i>	move it	+anim	±anim	<i>(k)àwòn</i>	move	+anim
<i>(c)íy-ik</i>	put inside, insert	+anim	-anim	<i>(c)íy</i>	enter	+anim

The first detail immediately observable in Table 49 is the requirement for the Causer to be animate, which is in contrast to the causatives from the verbs denoting states and processes (discussed above in 3.2.2.4.1), most of which also allow non-prototypical agents, such as natural forces or instruments, which are [-anim]. Likewise, the subject arguments of the base intransitive verbs are in all cases animate; only with two positional verbs, *kàtù* ‘lie’ and *kèti* ‘lean’, can the subject be inanimate as well. Moreover, in most cases, the intransitive subject argument is necessarily agentive (again in contrast to the intransitive bases expressing states and processes), which logically follows from the semantic profile of these verbs: they express

¹¹³ The parenthesized *-n-* indicates that both variants, i.e. with and without *-n-*, are equally acceptable.

body motion and body posture, with, in the case of the latter, the senses ‘assume position’ and ‘maintain position’ exhibiting agentive features (cf. Levin and Rappaport Hovav 1995: 126 on the different senses of verbs of ‘spatial configuration’). Here, the notion of control is responsible for the agentive profile of body motion/posture verbs, i.e. the participant who controls (and effects) the eventuality designated by the verb through his own energy is defined as an agent. This distribution is remarkable in that the data from Tima deviate somewhat from the generally assumed prototypicality of morphological causatives derived from patientive intransitive verbs (e.g. Kittilä 2013: 13; Nedyalkov and Silnitsky 1973: 7-8; Dixon and Aikhenvald 2000: 13).

Now, as can be seen from Table 49, the derived Causee can be animate and inanimate in most cases; only with three verbs, *dínà̀yìk* ‘help climb’, *dí̀yìk* ‘lead, help walk’, and *h̀d̀d̀ǹỳỳk* ‘seat (SG)’, is the Causee exclusively animate. And only one verb (*c̀ỳỳk* ‘put inside, insert’ is only compatible with inanimate Causees that are true patients. The next examples demonstrate the variability of the derived Causees in terms of animacy, where one and the same causative verb is compatible with both animate (ex. (222)) and inanimate (ex. (223)) Causees:

(222) *wáyè̀n àn-d́-y-ìk c̀ìb̀l̀*
 father PERF3-stand-HT-CAUS child
 ‘The father woke up the child.’
 (STH20190129 1)

(223) *Álì àn-d́-y-ìk m̀d̀d̀t̀à*
 Ali PERF3-stand-HT-CAUS motor
 ‘Ali started the motor.’
 (STH20190126 1)

The examples (224) and (225) below show the derivation of the verb *h̀d̀d̀áná* ‘sit’, which preserves the feature [+anim] under causativization:

(224) *ẁd̀r̀t̀s̀m̀áá́d̀s̀h à-h̀d̀áná ì=c̀l̀k̀ìd̀l̀k*
 man PERF3-sit DIR=chair
 ‘The man sat down in the chair.’
 (STH20200203 6)

- (225) *wéèn à-hððònt-ìk kárbáána nλhì*
 mother PERF3-sit-CAUS baby ground
 ‘The mother has seated the child on the ground.’
 (STH20200203 6)

And, lastly, the next example pair illustrates the discrepancy between the [+anim] intransitive subject argument and the [-anim] derived Causee with the verb (*c*)*íy* ‘enter’:

- (226) *à-yí ítìn*
 2SG-enter inside
 ‘Come inside!’
 (07.04.09_17-08.wav)

- (227) *íy-ìk=táŋ ítìn*
 put-CAUS=LOC3P inside
 ‘Put it there inside!’
 (12.03.07-05.wav)

In 3.2.2.1 above, we defined causative derivation as a morphosyntactic process that results in the demotion of the original subject to the syntactic position of the direct object. This operation requires the thematic role of the original subject to be compatible with specific semantic characteristics associated with a typical role of a direct object, i.e. Patient. The most prominent feature in this regard is the degree of affectedness – a prototypical Patient is characterized as an entity (totally) affected by the event ([+AFF]; see 1.2.2.3 on the definition of prototypical agents and patients adopted in this study). Now, we said that the underlying intransitive subject arguments of the body motion/posture verbs are all agentive, i.e. [+VOL, +INST, -AFF]. One noticeable exception to the agentive nature of the intransitive subject arguments pertains to the locational sense of the positional verbs *dó* ‘stand’, *kλtù* ‘lie’, and *kèti* ‘lean’; in this usage, the positional verbs are equally possible with inanimate and thus patientive subject arguments, typically requiring a locational phrase to render the proposition complete (cf. Levin and Rappaport Hovav 1995: 126, 146). However, as noted already, these verbs are agentive when used in the ‘assume position’ and ‘maintain position’ senses, in which case the verbs are only pragmatically possible with animate and explicitly agentive participants. Yet, the agentive nature of the base verbs contradicts the common tendency of morphological causatives to prefer

patientive base verbs due to the requirement for one instance of the same category (agent) in the same predicate. Consequently, we should look at the properties of derived causative constructions and at how the causativization affects individual features of the underlying intransitive subject, rendering it an appropriate argument to fill the direct object syntactic position. Recall that in the case of the patientive bases (3.2.2.4.1), the underlying thematic relation (Patient, or Undergoer) remains intact after the causative derivation. With agentive bases, the picture is different. After derivation, the semantic profile of the original subject shifts from fully agentive and instigating to a more patient-like configuration with animate Causees and can be characterized as [+VOL, -INST, +AFF]. The feature specification [-INST] means that in the derived causative predicate the ultimate Causer, i.e. the Instigator, is the new subject, and [+AFF] reflects the changed state of the Causee (a new location or position) resulting from the action of the Causer. Inanimate Causees are logically characterized as prototypical patients, i.e. [-VOL, -INST, +AFF].

In causative predicates with animate Causees, the implication is then that the (derived) Causee is in some respect dependent on the physical support of another person in order to perform the body motion or to assume the position denoted by the verb. Consequently, the corresponding causatives are appropriate in and restricted to contexts involving physically constrained or impaired persons (including due to old age) or babies and toddlers who are not in full control of their bodily actions. Importantly, with body motion/posture verbs, some amount of agentivity is still present in the derived Causee, since it is this participant who ultimately acts (through her/his body).

A special case is displayed by the following three verbs: *díŋà̀yík* ‘help climb’, *dítík* ‘lead, help walk’, which are compatible only with animate Causees, and *dówà̀yík* ‘help go down’ (also with animate Causees; I leave the sense ‘put down’ with inanimate Causees out of this discussion). Consider first the underlying intransitive predicate and the derived causative construction:

- (228) *wòrṣmáádsh àn-dìŋé*
 SG.man PERF3-climb
 ‘The man has climbed.’
 (STH 20200201 4)

- (229) *píná àn-dìŋá-y-ík wòrṣmáádsh*
 3SG PERF3-climb-HT-CAUS SG.man
 ‘(S)he has helped the man climb.’

As can be inferred from the translation, the meaning implied by the derived causative predicate is that of assistance rather than that associated with prototypical causation (as defined in 3.2.2.1). Here, the Causee preserves agency, i.e. the Causee performs the action denoted by the verbs with the Causer's assistance. Causatives with fully agentive animate Causees are treated in the literature (e.g. Kulikov 2001; Shibatani and Pardeshi 2002) under the label sociative (or assistive) morphological causatives. Dixon (2000) describes the sociative type of causation in terms of the involvement parameter, i.e. whether the Causer is directly involved in carrying out the caused event performed by the Causee. Kulikov (2001: 892) suggests considering such 'assistive' causative constructions as deviating from prototypical causatives (*causatives sensu stricto*) since they do not "incorporate the meaning CAUSE", but rather the meaning "help to bring about P₂".¹¹⁴ There are indeed noteworthy differences between sociative situations and genuine causative events. Here, the participant associated with newly introduced argument in the subject position basically carries out the action expressed by the verb together with the participant referred to by the derived direct object (Causee) and does not represent a participant totally affecting another participant (prototypical Causer).

The presence of two agentive participants (even though the Causee-agent displays reduced agentivity) in these sociative causatives makes them similar to indirect causation. There is an important conceptual difference, though, between these two types, i.e. indirect and sociative causation. The situation construed as sociative causation implies a spatio-temporal overlap between the causing and the caused events, i.e. the event is conceptualized such that the Causer's action cannot be clearly separated from the Causee's action (cf. Shibatani and Pardeshi 2002). This extralinguistic spatio-temporal overlap is reflected in a more fused (i.e. morphological) linguistic encoding, conforming to the principle of iconicity, despite the presence of two agentive participants. So, in contrast to indirect causation, sociative causation implies direct physical contact between the participants.

It is possible to build periphrastic causative constructions with body motion/posture verbs (again, as opposed to underlying patientive intransitives (see 3.2.2.4.1)). However, the

¹¹⁴ As Kulikov (2001: 892) further mentions, the assistive meaning expressed by the causative morpheme in some languages (as is the case in Tima) is conveyed by a special separate marker in other languages, e.g. some Amerindian languages. See also Guillaume and Rose (2010) on specialized markers expressing sociative causation as an areal feature in South American languages.

corresponding periphrastic causative constructions have a different meaning from the morphologically derived verbs. In the periphrastic constructions, all the agentive characteristics of the Causee are preserved and there is no implication of a spatio-temporal overlap or direct physical contact. Consider the following propositions:

- (230) *pínλ àn-díḡá-y-ìk wòṛṡḡmáádśh* (repeated)
 PRON3SG PERF3-climb-HT-CAUS man
 ‘(S)he helped the man climb.’
 (STH 20200201 4)

- (231) *wèén àḡ-kàmùh cíbλ mḡ-díḡé átòṛàḡ*
 mother PERF3-let child OPT3-climb on.top
 ‘The mother let/allowed the child to climb on top.’
 (STH20200201 4)

In contrast to (230), the proposition in (231) does not imply that the causing action of the mother (Causer) occurred simultaneously with the caused action of the child (Causee); moreover, the sentence in (231) does not necessarily imply the actualization of the caused subevent (see 3.2.2.6 below for general remarks on periphrastic causatives in Tima and associated semantic implications).

3.2.2.4.3 Morphological causatives from ingestive verbs

In section 2.2.2.1 above, the subgroup of ingestive verbs was discussed as being representative of the semantic group with middle semantics. As was stated there, the majority of ingestive verbs in Tima are lexicalized verbs, aside from a small group of basic ingestive verbs (‘eat’, ‘drink’, and ‘suck (milk)’) that are based on precategorial roots. These verbs allow causative derivation. The next table shows the causative verbs and the corresponding intransitive forms derived with the intransitivizing suffix *-ak/-ak* (with *mḡḡk* ‘drink’, we observe assimilation of the suffix vowel to the root vowel).

Table 50. Morphological causatives from ingestive verbs

Causative verb	English gloss	Intransitive verb	English gloss
<i>mók-òk</i>	give to drink	<i>mók-òk</i>	drink
<i>(k)áli-ìk</i>	feed	<i>(k)áli-àk</i>	eat
<i>(k)áy-ìk</i>	breastfeed	<i>(k)áy-àk</i>	suckle

Consider the causative alternation with the verb *káli-* ‘eat’ for illustration:

- (232) *cibá* *céŋ-káli-àk*
 SG.child IPFV3-eat-MID/REFL
 ‘The child eats/is eating.’
 (STA20200206)

- (233) *wéèn* *céŋ-káli-ìk* *cibá*
 SG.mother IPFV3-eat-CAUS SG.child
 ‘The mother feeds the child.’
 (STA20200206)

With causativized ingestive verbs, both the Causer and the Causee are animate. Here, the Causee again exhibits agentive features, i.e. the Causee with ingestive verbs deviates from a prototypical patient. The Causee can be characterized through the semantic feature specification [+VOL, +INST, +AFF] and thus represents the semantic category ‘affected agent’ (Næss 2007; see 2.2.2.1). This constellation of features differs from those of the Causees in causative constructions based on body motion/posture verbs described above (3.2.2.4.2) by the positive value +INST (with the exception of assistive causatives), since this participant carries out the action denoted by the verb (eating, drinking, sucking) him/herself. Instigation is a major characteristic of prototypical agents and, consequently, the Causees of ingestive verbs exhibit a higher degree of agentivity than the Causees of body motion/posture verbs. As mentioned already, typologically, morphological causatives strongly prefer patientive Causees, yet many languages, Tima included, allow causativization of ingestive verbs (as alluded to earlier in 2.2.2.1). Næss (2007, 2009) explains this fact through the double nature of the subject arguments of ingestive verbs expressed by the label ‘affected agent’ (affectedness being the major defining property of a patient): under causativization, the patientive aspect of these verbs is actualized, thus allowing the addition of an agentive participant into the argument structure.

The peculiar morpho-syntactic behavior of ingestive verbs, especially with regard to causativization, has been a recurrent topic in the linguistic accounts of causativity (Næss 2007, 2009 offers quite a comprehensive overview). Indeed, some authors even suggest considering ingestive verbs – due to their unique status – as a separate verb class (aligning with middle verbs), aside from the traditionally established intransitive vs. transitive verbs. Shibatani (2000: 6), based on the cross-linguistic evidence concerning verbs susceptible to morphological causativization, sets up such verb classes as: i) inactive intransitives, ii) middle/ingestive verbs, iii) active intransitives, and iv) transitive verbs. Likewise, Haspelmath (2016: 42) notes: “One could probably set up a verb meaning type intermediate between transitive and intransitive [...]: verbs of ingestion (‘eat’, ‘drink’ [...]), which have repeatedly been reported to allow synthetic causatives in languages that do not have causatives of transitives otherwise.”

Causatives derived from the ingestive verbs *kàlàk* ‘eat’ and *mók* ‘drink’ show some distinct features as compared to causatives from agentive body motion intransitives with regard to the acceptable possibilities of interpretation. With ingestive verbs, morphological causatives are not only compatible with an assistive reading, e.g. the spoon-feeding of a baby or a physically impaired person, but are likewise acceptable in contexts of serving food for guests, as illustrated by the following example:

(234) *kàhúnèn céŋ-kàlì-ìk òyèntúk*
 woman IPFV3-eat-CAUS PL.guest
 ‘The woman feeds the guests.’
 (STA20200206)

The sentence above conveys an indirect causative meaning with two agentive participants who act on their own; there is no necessary implication of a spatio-temporal overlap since some time may pass between the woman’s serving the food and the guests’ act of consuming the served food. Such interpretational flexibility is not available with morphological causatives from body motion/posture intransitive verbs. There, only the assistive reading is possible, implying direct physical contact; the non-contactive reading requires periphrastic causative formation (see 3.2.2.6 on periphrastic causatives).

With the verbs *kàlàk* ‘eat’ and *mók* ‘drink’, it might be due to the pervasiveness and the high social significance in every human society of the interaction described – and therefore also connected with the high frequency of usage of the corresponding linguistic expression – that the more compact causative construction has been conventionalized and come to be used also

in contexts of indirect causation (which normally receive periphrastic, and hence longer, linguistic expressions).

3.2.2.5 Lexicalized causative verbs

Aside from productively formed causative verbs, i.e. verbs where the causative suffix is a morphologically analyzable morpheme, Tima has a number of lexicalized verbs with a frozen causative morpheme as part of the lexeme. Synchronically, these verbs do not have an unmarked counterpart; some of them exhibit labile behavior in that the same verb form can be used in intransitive predicates, either in the resultative (see 3.3.3) or middle (see 3.3.5). The following tables; Table 51 and Table 52, list the attested lexicalized causative verbs.

Table 51. *Lexicalized causative verbs*

Causative (transitive) verb	English gloss
àṭə̀k	add (more)
hílín̄j̄k (telic)	send
hílìk (atelic)	
jìj̄k	sieve, filter
kʌ̀ṭuk	hunt it
mólólhòk	destroy (by drowning)
tòrór̄k	pull out
páàc̄k	flood
(k)áh̄k	show
bórór̄k	promote, advance
kùdúndùk	shape balls
ṭólòk	damage by treading

Table 52. *Lexicalized causative verbs with intransitive counterparts*

Causative (transitive) verb	English gloss	Intransitive counterpart	English gloss
dúkùk	drip it	dúkùk	drip (intrans.)
dúpùk	put down	dúpùk	descend
hól̄ṭə̀k (telic)	fell (tree)	hól̄ṭə̀k	be felled
hólòk (atelic)			

<i>k(w)àtòk</i>	shake it	<i>k(w)àtòk</i>	be shaken
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Concerning the labile verbs (Table 52), the argument structure in which the verb form is used disambiguates which of the meanings is implied, i.e. either one associated with a transitive (ex. (235)) or with an intransitive (middle or resultative) structure (ex. (236)):

(235) *píná cén-dúkùk ídí nàhì*
 PRON3SG IPFV3-drip water on.the.ground
 ‘(S)he is dripping water on the ground.’ (transitive)
 (STH20200201 2)

(236) *ídí cén-dúkùk nàhì*
 water IPFV3-drip on.the.ground
 ‘The water is dripping on the ground.’ (middle)
 (STH20200201 2)

Since the causative element is lexicalized, the addition of other derivational elements occupying the regular structural position of the causative suffix is not precluded (see 1.3.4.1 on the verbal structure in Tima):

(237) *Álì céη-kàtùk-w-àk*
 Ali IPFV3-hunt-EP-AP
 ‘Ali is hunting.’ (antipassive)
 (STH20190128 3)

The meanings of the constructions with the presented verbs can be said to be somewhere between causation and transitivity. With regard to the causative aspect of the meaning, the verbs express what is called a direct (or contactive, manipulative) relation between the agent and the second, generally inanimate participant. The higher probability of these verbs undergoing lexicalization may be linked to their conceptual profile, as captured nicely by Shibatani (2002: 7):

When the causee is patientive, the only resistance the causer encounters in bringing about the change in the causee is the latter’s inertia – continuing to rest or continuing to undergo a change. It is simply a matter of overcoming this inertia, and the execution of the caused event is entirely

under the agent’s control. In contrast, when the causee is agentive, the causer must appeal to the causee agent’s volition in carrying out the caused event. Whatever effort the causer might exert in bringing about the agentive caused event, it cannot effect it without a volitional involvement of the causee.

The statement about the animate (agentive) Causees in the above quotation fits the distribution in Tima in that there are no lexicalized causatives with animate Causees.

To conclude this short overview of lexicalized causative verbs, we can sum up that for these verbs, there is a high degree of integration of the Agent’s action and the Patient’s affectedness from this action with complete spatio-temporal overlap.¹¹⁵ This semantic profile results in the conceptualization of the corresponding event as a single atomic unit. And, as Sakšena (1980: 818) puts it, “[c]onceptualization as a single activity paves the way for lexicalization.”

3.2.2.6 Periphrastic causatives

Periphrastic (or analytic/ syntactic) causatives are described as constructions, in which a free form, “typically a verb”, conveys the causative meaning (Kulikov 2001: 886), thus contrasting with morphological causatives that imply a bound status of the causative element. Periphrastic causative constructions in Tima employ the verb *kàlmùh* ‘leave, let (go), give up’,¹¹⁶ as the following example illustrates:

- (238) *wéén àη-kàlmùh kàcimbárí ò-kámà-àk*
 mother PERF3-let child P-wash-MID/REFL
 ‘The mother let the child wash (him/herself).’
 (STH20200207 2)

As the sentence above demonstrates, the periphrastic causative construction in Tima has a compound structure consisting of two predicates. The first predicate, headed by *kàlmùh*, expresses the causing event and has as its subject the Causer. The second predicate signifies the

¹¹⁵ See Shibatani and Pardeshi (2002), who define direct-indirect causation in terms of the degree of spatio-temporal overlap between the causing and caused events.

¹¹⁶ Outside of causative contexts, the verb *kàlmùh* ‘let (go), give up’ can be used with its literal meaning, e.g. *Naasir ankamuh kaṭe* ‘Nasir gave up smoking’ (07.03.10_06_15.wav).

caused event and has its own subject – the Causee. From the syntactic point of view, the caused event predicate is dependent on the first predicate. This dependence is partially reflected in the lack of tense-aspect marking of the verb complex expressing the caused event – only the causing event predicate is marked for tense-aspect. Thus, the caused event in (238) has a neutral temporal specification and may refer to a future event or to an already actualized situation. Disambiguation occurs on the contextual level. However, the caused event can be marked for mood (see 1.3.4.2.2.3 on mood marking in Tima):

- (239) *wèén àḡ-kàmùh cibà mḡ-díḡé átòḡàḡ* (repeated)
 mother PERF3-let child OPT3-climb on.top
 ‘The mother let/allowed the child to climb on top.’
 (STH20200201 4)

Periphrastic causatives usually describe situations of indirect causation, such as giving verbal orders or directions. That the periphrastic (or analytic) formation aligns with indirect causation has been described in the typological literature as a cross-linguistic tendency (e.g. Comrie 1981: 172; Dixon 2000: 74ff).

The compound syntactic structure allows a high degree of syntactic flexibility: in contrast to morphological causatives, periphrastic causatives can easily be construed with transitive verbs, e.g.:

- (240) *píná àḡ-kámúh k̀cimbárí ì-ḡíbí-í=à=ḡàḡ kwèéḡ*
 PRON3SG PERF3-let SG.child P-fill-HT=SOURCE =LOC3P SG.bowl
 ‘(S)he let the child fill up the bowl.’
 (STH20200201 2)

Ditransitive clauses can be embedded into the periphrastic causative construction as well:

- (241) *wáyén àḡ-kámúh cibá ḡ-káh-í=yáḡ yàn hòwàn ò=wórḡḡkòlḡ*
 father PERF3-let SG.child P-give-HT=LOC3P money DIR=old.man
 ‘The father let the child give money to the old man.’
 (GSB STH20220121)

The periphrastic strategy is equally possible with lexical causatives (as a type of transitive verb) in the dependent clause:

- (242) *πῖνά ἀη-κἀμύη* *ωὐρῖσμάἀδῶ* *ὀ-τὸμὸ=ἀ=τᾶη* *κῖγάμὸ*
 PRON3SG PERF3-let SG.man P-kill=SOURCE=LOC3P SG.enemy
 ‘(S)he let/made the man kill the enemy.’
 (STH20200209 3)

Likewise, it is possible to construe a periphrastic causative predicate with morphologically derived causative verbs in the dependent clause, as demonstrated below:

- (243) *ωἔἔν ἀη-κἀμύη* *κωἀδῶ* *ἰ-κἀλῖ-ἰκ* *κἀρβάἀνά*
 mother PERF3-let SG.babysitter P-eat-CAUS SG.baby
 ‘The mother let the babysitter feed the baby.’
 (GSB STH20220221)

Importantly, the bi-clausal structure of the periphrastic causatives allows the negation of the caused event in contrast to one-clausal morphological causatives. Consider for illustration the following sentences:

- (244) *ωἔἔν ἀη-κἀλῖ-ἰκ* *κῖβά* **(πῖνά* *κῖ=κἀλῖ-ἀκ=ἀη)*
 mother PERF3-eat-CAUS child PRON3SG NEG=eat-MID/REFL=NEG
 ‘The mother has fed the child *(but (s)he didn’t eat).’

- (245) *ωἔἔν ἀη-κἀμύη* *κῖβά* *μῖ-κἀλῖ-ἀκ*
 mother PERF3-let child OPT3-eat-REFL/MID
πῖνά *κῖ=κἀλῖ-ἀκ=ἀη*
 PRON3SG NEG=eat-MID/REFL=NEG
 ‘The mother let the child eat, but (s)he didn’t eat.’
 (STA20200206)

The sentence in (244) states that the child has eaten, i.e. the morphological causative construction predicates the resultant state of the Causee brought about by the Causer’s action. Notably, the Causer’s action remains unspecific, i.e. the causing event is not explicit.

The proposition in (245), by contrast, does not necessarily imply the actualization of the caused event; here, the Causer’s action is clearly separated from the caused event and thus, the latter can be negated independently of the main clause that expresses the causing event.

The different propositional values may be linked to distinct implications associated with the two construction types. That is, the more compact morphological causatives are usually associated with direct causation and periphrastic constructions with indirect causation. Some authors (e.g. Wolff 2003) suggest, as a significant criterion for the delineation of direct and indirect causation, the possibility of an intervening cause between the causing and the caused events: only indirect causation is compatible with such a configuration, since there, the Causer and the Causee are both associated with their separate spatio-temporal profiles, that do not need to overlap (as formulated by Shibatani and Pardeshi 2002).

A widespread assumption with regard to periphrastic constructions is their almost unlimited productivity. The Tima data basically confirm this claim. It is also worth mentioning that in Tima, as in many other languages, there is a preference for agentive Causees and the prohibition of highly patientive Causees (inanimate entities or subjects of state predicates) as decisive criteria for the employment of periphrastic causative constructions. With verbs allowing both the morphological and the periphrastic causative formation, there are important semantic and implicational discrepancies between the two constructions. Recall from the discussion in 3.2.2.4.2 that morphological causatives from body motion/posture base verbs imply the direct physical involvement of the Causer, while the corresponding periphrastic causatives do not have such an implication, which ultimately results in a quite different conceptual status of the derived Causees in these two construction types.

To conclude, the overall picture that arises suggests a relatively well-defined delineation of morphological and periphrastic causatives in terms of their functions in Tima. In the cases of lexical gaps, i.e. when no lexical causatives exist, and when morphological causativization is not applicable for particular events (due to lexical constraints), it will be the more productive periphrastic strategy that remedies this problem.

3.2.3 The transitivizing function of *-Vk* (without causative notion)

The functional affinity of the causative marker *-Vk* to transitivity marking was mentioned briefly in 3.2.2.5. Indeed, the interpretation of causatively derived verbs with inanimate Causees might deviate from the prototypical definition of a causative construction ('cause to [verb]'), leaning more towards the function of introducing a second participant acted upon by the subject without any causal relationship between the two events – i.e. marking transitivity.

This section will provide some more details on the transitivity function of the causative suffix in Tima. This extension of the analysis is by no means irrelevant to the semantic classification of Tima verbs. That is, the functions of the causative suffix cannot be defined in terms of a discrete linguistic category. Rather, we should speak of a continuum of functions whose exact interpretation depends on the interaction of such factors as verbal lexical meaning and the semantic properties of the participants. (See e. g. Zide 1972; Shibatani 2000: 525-528, 548-563 for a discussion of the criteria for the distinction between transitivity and causation from a typological point of view.)

The employment of *-Vk* as a marker of transitivity applies to a relatively restricted class of verbs, listed in Table 53.

Table 53. Transitive verbs marked with the suffix *-Vk*

Atelic verb form	English gloss (all entries imply transitive usage)
<i>dé-èk</i>	scoop
<i>tét-èk</i>	chop
<i>tól-òk</i> (telic)	finish
<i>tól-òk</i> (atelic)	
<i>(c)éèl-ik</i>	sell
<i>kwáár-ik</i>	dress
<i>ηání-ik</i>	carry
<i>pìrì-ik</i> (<i>ciηi</i>)	light up (fire), shoot
<i>róbò-y-ik</i> (telic)	join, link
<i>róbò-òk</i> (atelic)	
<i>ηól-òk</i>	scoop
<i>(k)ámò-òk</i>	wash, bathe
<i>kàbù-y-ik</i>	dig, plant
<i>kùbù-y-ik</i>	cover
<i>pùr-ik</i>	warm up
<i>pù-y-ik</i>	throw
<i>gúd-ik</i>	open
<i>tùp-ik</i>	turn over
<i>gól-òk</i>	clean
<i>tàr-òk</i>	clear (the field)
<i>gù-y-ik</i>	thresh

<i>dáṭ-òk</i>	winnow
<i>kàh-ùk</i>	pour
<i>kál-ùk</i>	eat

Aside from the verbs listed above, an idiomatic expression exists that uses a transitive verb *dàk* ‘beat’ or *hó* ‘hit’ additionally extended by the suffix *-Vk*:

- (246) *dàk-ik/ hó-y-òk* *ṭṛén* *η=kâh*
beat-CAUS/ hit-EP-CAUS LOC1SG INS=head
‘I remembered (lit. it beat/hit me on the head)’
(STH20190128 3)

Normally, however, *dàk* ‘beat’ and *hó* ‘hit’ do not take the suffix *-Vk*. The verb *dàk* ‘beat’ is followed by a direct object without any additional marking, e.g. *dàk kəbàṭá* ‘play (lit. beat) guitar’; the verb *hó* requires the transitivity marker, e.g. *hó-ó kúù* ‘hit the dog’ (here the transitivity marker *-i/-l* assimilates to the root vowel; see 1.3.4.3.1 on transitivity marking in Tima).

With regard to the phonetic realization of the suffix vowel, we can observe from Table 53 that here, the vowel shows a much higher degree of assimilation to the preceding root vowel: in 16 out of 24 cases the suffix vowel copies the preceding vowel. From the remaining six entries, five verbs, all with [-front] root vowels, have the suffix vowel *u/ɔ*: *kàhùk* ‘pour’, *kálùk* ‘eat’, *dáṭòk* ‘winnow’, *táṛòk* ‘clear (field)’, and *ṭṛòlòk* ‘clean’. And three verb forms have the suffix *-ik*: *kwááṛik* ‘dress (someone)’, *róbòyik* ‘join it (telic)’, *(c)éèlik* ‘sell’. This distribution is in remarkable contrast with the causative proper. Recall from section 3.2.2.3 that in its causative (proper) function, the majority of the verbs have the suffix form *-ik/-ik*.

In one single case, with the verb *kálá-* ‘eat’, the two functions, causative and transitivity marking, are expressed through two distinct forms, as shown in (247):

- (247) *píná* *àṇ-káli-ik* *cibá*
PRON3SG PERF3-eat-CAUS SG.child
‘(S)he has fed the child.’ (causative)
(STH20190122 1)

- (248) *píná* *àŋ-kálùk* *ítúk*
 PRON3SG PERF3-eat:CAUS porridge
 ‘(S)he has eaten porridge.’ (transitive)
 (STH20190122 1)

It is not permissible to exchange the two verb forms illustrated above: the verb form *kálìik* ‘feed’ is only used in prototypical causative contexts (i.e. make someone eat), whereas *kálùk* is used with the meaning ‘eat’ and allows exclusively food types as the referent of the direct object. Note that, in (248), the root vowel and the suffix vowel merge together, yielding a shorter form than in the case of the causative function shown in (247). The shorter form might be due to the higher frequency of usage of the verb in transitive constructions (see Haspelmath 2021 on the correlation between the frequency of usage and the relative size of the corresponding linguistic form). On the other hand, the reduced forms might be considered as displaying a higher degree of fusion and thus moving towards lexicalization. This development (i.e. towards a more lexicalized form) is not surprising with these particular verbs. As Shibatani (2002: 10) observes, the “situations involving a human causer and a patientive and most often inanimate causee” tend to be (more) lexicalized verbs (or lexical causatives) due to the prevalence of such situations in the daily interactions of humans with their environment.

Again, the alternating expression of the two functions – causative and transitivity marking – with the verb *kálá-* ‘eat’ is the only attested case where the two functions are so clearly separated, in terms of their formal expression, with the same verb. Yet, it unequivocally demonstrates that the two usages are differentiated in Tima.

Crucially, ten verbs from Table 53 use the suffix *-Vk* to mark transitivity, in complementary distribution with the basic transitivity marker *-i/-I* (see 1.3.4.3.1) in atelic and telic constructions, respectively. Consider the following table:

Table 54. The suffix *-Vk* as a marker of transitivity in complementary distribution with *-i / -I*

Telic verb form (root-(EP)-HT)	Atelic verb form (root-CAUS)	English gloss (all entries imply transitive usage)
<i>déé-y-i</i>	<i>dé-èk</i>	scoop
<i>kàbù-y-i</i>	<i>kàbù-y-ùk</i>	dig, plant
<i>kùbù-y-i</i>	<i>kùbù-y-ùk</i>	cover

<i>ηάνι-ί</i>	<i>ηάνι-ικ</i>	carry
<i>ρὺλ-ά=ά=τάνη¹¹⁷</i>	<i>ρὺλ-ὺκ</i>	warm up
<i>ρὺγ-ί</i>	<i>ρὺγ-ὺκ</i>	throw
<i>τὺδύ-ω-ί</i>	<i>τὺδ-ὺκ</i>	open
<i>τὺπ-ί</i>	<i>τὺπ-ὺκ</i>	turn over
<i>ρόβδύ-ί</i>	<i>ρόβδύ-ικ (telic)</i> <i>ρόβδ-δκ (atelic)</i>	join
<i>πὶλῖ-ί</i>	<i>πὶλῖ-ικ (cηι)</i>	light up (fire), shoot

The example pair below illustrates the complementary distribution of the transitivity marker *-i/-* and *-Vk*:

- (249) *ωδρτῆσμάάδśh* *άm-πὶλῖ-ί* *cηί*
man PERF3-sparkle-HT fire
‘The man has lit a fire.’
(STA20200210)

- (250) *ωδρτῆσμάάδśh* *cέm-πὶλῖ-ικ* *cηί*
man IPFV3-sparkle-CAUS fire
‘The man is lighting a fire.’
(STA20200210)

Both sentences, (249) and (250), are transitive predicates with the same participants in the corresponding subject and object syntactic positions. As immediately noticeable when comparing the two variants above, the only difference between the two predicates is in terms of their aspectual value. The verb form marked with the transitivity marker *-i* is telic, i.e. it expresses a single action carried out by a single participant. Its counterpart in (250), with the suffix *-ik*, is atelic, i.e. unbounded: the event is construed as ongoing through the imperfective morphology. In section 1.3.4.4 on pluractionality, it was noticed that in Tima, an atelic (i.e. pluractional) construction may result either from the plural number of participants (ex. (251) below as opposed to (252)) or from the imperfective morphology (prefix *cV(N)-*) as exemplified in (253) as opposed to (254). Correspondingly, the alternate construction employing the suffix

¹¹⁷ Only the form extended with the marker *=a=τάνη* (here bearing the completive marker function) has been attested. Here the transitivity marker *-i* assimilates to the next vowel of the clitic *=a=τάνη*, resulting in *α*.

-*Vk* is used in both cases, with imperfectively marked predicates (ex. (253)) and with plural participants (in which case the verb may be marked with perfective morphology, as in (251)):

(251) *yáhúnén* *àn-tùp-ùk=à=ṣáṣ* *ìrṣòṣ*
 PL.woman PERF3-turn.over-CAUS=SOURCE =LOC3P PL.pot
 ‘The women have turned the pots upside down.’
 (STA20200212 1)

(252) *káhúnén* *àn-tùp-í* *tóṣòṣ*
 SG.woman PERF3-turn.over-HT SG.pot
 ‘The woman has turned the pot upside down.’
 (STA20200212 1)

(253) *cíhà* *cén-ṣùd-ùk* *kòkwán*
 SG.wind IPFV3-open-CAUS SG.door
 ‘The wind opens the door (repeatedly).’
 (STH20200211 3)

(254) *cíhà* *àn-ṣùdù-w-í* *kòkwán*
 SG.wind PERF3-open-EP-HT SG.door
 ‘The wind has opened the door.’
 (STH20200211 3)

Note that with the verbs presented in Table 54, it is not acceptable to use the transitivity marker *-i /-i* in contexts where an atelic reading is implied (including with ongoing, durative, and iterative events, and/or plural participants). For example, the sentence **cíhà cén-ṣùdù-w-í kòkwán* is ungrammatical due to the conflict between the prefix *cén-*, marking imperfective aspect, and the transitivity suffix *-i*, associated with telicity.

Aside from the pairs listed in Table 54 where the telic counterpart is marked with *-i /-i*, other individual verbs have been recorded that employ the suffix *-Vk* in constructions with plural participants, or in imperfective contexts, as opposed to unmarked verb forms in constructions with singular participants and/or perfective verb morphology:

Unmarked verb form (telic contexts)	Marked verb form (atelic contexts)	English gloss
<i>hùm</i>	<i>hùm-ùk</i>	put
<i>púríúúr</i>	<i>púríúúr-ùk</i>	thin down, stir

For example:

(255) *nàà-hùm=à=táŋ* *ídáŋ* *yùh*
 2PL-put=SOURCE=LOC3P mud LOC.bone
 ‘You (PL) put the mud inside.’ (single action)
 (STA20200206)

(256) *cè-hùm-ùk* *tùlkù* *iyédi*
 IPFV3-put-CAUS waterbag LOC.back
 ‘(S)he is putting the waterbag onto her/his back.’ (ongoing activity)
 (STH20190122 5)

That the causative marker can be used for marking transitivity is not at all unusual (see e.g. Dixon and Aikhenvald (2000: 5) for a typological perspective on this matter). After all, both constructions are transitive two-participant structures with an agentive subject and a patientive second participant. For example, Shibatani and Pardeshi (2002) note that it is not unusual for languages to employ one and the same morpheme for marking both transitive and causative verbs. They remark, in this regard (Shibatani and Pardeshi 2002: 88):

Although many languages make this distinction between transitive verbs (with a causative meaning) and causative forms, a neat distinction between the two is not always maintained. In some languages the same morpheme is used in forming what corresponds to a transitive verb as well as that which corresponds to causative forms in other languages.

The distribution between the dedicated transitivity marker and the causative suffix in terms of the aspectual opposition that we observe in Tima is attested in other languages as well, for instance in Lithuanian, by Holvoet (2015: 149), who also mentions Indo-European and Semitic languages exhibiting this association with aspectual differentiation; and in Manambu and Tariana by Aikhenvald (2011). The multi-functionality of the causative marker also serving as an aspectual marker has also been reported in typological studies, such as, e.g., Nedjalkov (1966) and Nedjalkov and Silnickij (1969). The aspectual senses associated with the causative

markers mentioned in the literature include iterativity, durativity, and intensification, among other notions. For such cases, i.e. when either (prototypical) causative or aspectual function is borne by one morphological element, Kulikov (1999) introduces the notion of split causativity, meaning the split-off of additional functions from the prototypical causative-marking function borne by a morpheme.

3.2.4 Concluding remarks

In conclusion, I would like to stress that in Tima, the prototypical causative operation is available only with intransitive base verbs (either underived or derived with detransitivizing morphemes from precategorial roots). What might seem to be an exception to this generalization are the ingestive verbs listed among the bases for causative derivation in 3.2.2.4.3. However, as was argued in 2.2.2.1, ingestive verbs are not considered typical transitive verbs due to the double nature of their subject (defined as affected agent (cf. Næss 2007)) that allows them to behave as both intransitive and sometimes as transitive verbs; under causativization, the ingestive verbs behave like intransitive verbs.

The restriction to base intransitive verbs in Tima is in contrast to the closely related language Katla, where the causative derivation is much more productive and can be applied to both intransitive and transitive verbs (Hellwig 2019).¹¹⁸ Tima thus belongs to those languages for which the causative derivation generally prefers intransitive bases; this, according to some cross-linguistic studies, is a widely favored tendency (Nedjalkov and Silnitsky 1973: 7-8; Dixon and Aikhenvald 2000: 13; Shibatani 2002).

Furthermore, we observed an interesting distribution with respect to lexicalized causative verbs. It was noted in 3.2.2.5 that there are no lexicalizations with animate Causees in Tima. Especially with agentive Causees, and particularly with body motion/posture verbs, the motivation for the resistance to the lexicalization of causative verbs seems reasonable: the language has to preserve the underived verbs to enable the expression of the (probably more frequent) situations when the underlying agent acts on her/his own. Likewise, the resistance to lexicalization may

¹¹⁸It is noteworthy in this respect that in Katla, the synchronic one-morphemic causative suffix *-taka(k)* ~ *-taka(k)* may be analyzed diachronically as consisting of two morphemes: “the applicative *-ta(ŋ)* ~ *-ta(ŋ)* plus the simple causative *-ka(k)* ~ *-ka(k)*” (Hellwig 2019: 519).

be explained by invoking the iconicity principle and the degree of integration of the causing and caused events. According to the iconicity principle, the degree of fusion of linguistic elements constituting an expression corresponds to the conceptual independence of the participants or events (Haiman 1983: 782-3). With animate agentive Causees, it is not as easy to blend the causing and the caused subevents due to the greater cognitive salience of an animate and, in particular, a human participant with her/his own volition and, concomitantly, his/her own partial agentive profile.

‘He is repairing a wheelbarrow.’

(STA20200210)

ii) The anticausative function (glossed ACAUS):

(258) a) *yádíñkádíñ* *àn-túǵú-ùk=à=ǵáñ*
PL.ball PERF3-burst-ACAUS=SOURCE=LOC3P
‘The balls have burst.’
(SHT20200201 4)

b) *ibárímbárí* *àn-túǵú-w-í* *yádíñkádíñ*
children PERF3-burst-EP-HT PL.ball
‘The children have burst the balls.’
(SHT20200201 4)

iii) The one-participant middle function (glossed MID):

(259) a) *kłhúnén* *cé-ǵòwààǵ-èk* *á=ǵòndò*
woman IPFV3-move.aside-MID SOURCE=way
‘The woman goes aside off the road.’
(STH20200209 3)

b) *kłhúnèn* *cè-ǵòwààǵ* *ílóm* *á=ǵòndò*
woman IPFV3-move.aside rubbish SOURCE=way
‘The woman removes the rubbish off the road.’
(STH20200209 3)

Sections 3.3.3, 3.3.4, and 3.3.5 explore these three functions and their distribution across the verbal lexicon in Tima. As will be shown below, the semantic properties of the verbs and, likewise, the structural patterns associated with a particular function allow us to classify this large group into coherent classes. Before proceeding to the individual functions, we should consider the formal properties of the morpheme *-Vk* in its detransitivizing usage in terms of its phonetic realization. In contrast with the transitivity use (i.e. the causative) of what is

presumably the same morpheme (from the synchronic point of view; see 3.2.2.3), here, a greater degree of assimilation to the preceding vowel can be observed.

3.3.2 Formal properties – phonetic realization

The representation of the morpheme as *-Vk* indicates the underspecified nature of the suffix vowel. As with other derivational suffixes following the verbal root, the vowel harmony rule holds in terms of ATR feature specification. That is, the vowel of the suffix assimilates to the ATR value of the preceding root vowel(s). With regard to further feature specifications in terms of frontness and closeness, no exact rule can be established, and the phonetic realization of the suffix vowel can only be stated in terms of general tendencies. Still, in a good number of the attested cases, the suffix vowel ‘copies’ the root vowel (Bashir 2010: 188), e.g.:

<i>àn-dìt-ik</i>	‘it has been entangled’
<i>à-míhì-ik</i>	‘it has been smeared’
<i>àη-kàbù-y-ùk</i>	‘it has been dug out’
<i>àη-kùmún-ùk</i>	‘it has been found/seen’
<i>àn-có-òk</i>	‘it has been pierced (once)’
<i>àη-ηólò-òk</i>	‘it has been scooped’
<i>àm-bòl-òk</i>	‘it has been forged’
<i>à-mínáné-èk</i>	‘it has been found’
<i>àη-kìdémé-èk</i>	‘it closed’
<i>cé-mìrn-ik</i>	‘it divides, splits’
<i>àm-pùrú-ùk</i>	‘it (PL) warmed up’
<i>à-rí-ik</i>	‘it (PL) changed’
<i>àn-tóní-ik</i>	‘it (PL) broke’
<i>àn-tòbòr-òk</i>	‘it (PL) unrolled, unwound’
<i>àn-tápá-àk</i>	‘3P (PL) crawled’
<i>à-hódà-àk</i>	‘3P (PL) have leaped’
<i>cén-tón-òk</i>	‘3P return(s)’
<i>àn-dùp-ùk</i>	‘3P (PL) descended’
<i>cé-rìh-ik</i>	‘3P turn(s)’
<i>cén-ṭól-òk</i>	‘3P (PL) agree (lit. come together)’

In most cases, the high back (*u / ʊ*) and high front (*i / ɪ*) preceding vowels get copied in the suffix *-Vk*. However, in some cases, the suffix vowel is high front *i / ɪ* or central closed *ɨ* after the preceding *u / ʊ*, e.g., *a-múùr-ìk* ‘it has been picked’.

More or less regularly, the high front *i / ɪ* in the suffix of the resultative verb form occurs after the epenthetic glide *y*, independent of the root final vowel, e.g.:

<i>àn-dàwú-y-ìk</i>	‘it has been bent’
<i>àn-déè-y-ìk</i>	‘it has been scooped’
<i>à-mòrà-y-ìk</i>	‘it has been plastered’
<i>àm-bàrà-rà-y-ìk</i>	‘it tore (in many places)’
<i>à-mèné-y-ìk</i>	‘it (PL) reduced’

Also tendentially, the central vowel *ɘ* in the suffix follows the preceding *a* and *ɛ* in the root, e.g.:

<i>à-làṭṭ-èk</i>	‘3P has been followed’
<i>àṅ-kòhàṭṭ-èk</i>	‘it has been cleared (field)’
<i>àn-cìléṅ-èk</i>	‘it has been rinsed’
<i>àn-cèdèm-èk</i>	‘it has been picked up, collected’
<i>àn-tààn-èk</i>	‘it (PL) broke’
<i>à-ròwààṛ-èk</i>	‘3P (PL) moved aside’

Less frequently, *ɘ* in the suffix occurs after *ɔ* and *ɪ* in the preceding root, e.g.:¹¹⁹

<i>àm-pàyít-èk</i>	‘it has been spread’
<i>àn-tṣṣòl-èk</i>	‘it has been cleaned’

And the last observed tendency is that the central mid-open *ɶ* in the root is followed by the closed central *ɨ* in the suffix:

<i>àṅ-kàrh-ìk</i>	‘it has been carved’
<i>àn-díḷḷ-ìk</i>	‘it has been plaited’

¹¹⁹ See 3.2.2.3 on the distribution of the central vowel *ɘ* across the attested usages of the suffix *-Vk* and its tendency to appear more frequently in the speech of elderly Tiima speakers.

<i>àm-bàrh-ìk</i>	‘it has been washed’
<i>àη-kwààr-ìk</i>	‘it has been cut’
<i>àn-tìlàn-ìk</i>	‘it (PL) melted’
<i>àm-pìlàn-ìk</i>	‘it (PL) expanded’

3.3.3 The resultative function

3.3.3.1 General overview

The resultative function is understood in the present analysis in the narrow sense as defined by Nedjalkov and Jaxontov (1988: 6): “The term resultative is applied to those verb forms that express a state implying a previous event.”¹²⁰ The following sentence illustrates a resultative construction in Tima:

- (260) *cìḡ* *àη-kòrò-m-òk*
 cloth PERF3-cut-RES
 ‘The cloth has been cut.’
 (STH20200201 1)

The following example shows the transitive counterpart of the resultative in (260):

¹²⁰ Taking the cross-linguistic perspective, the authors stress an important difference between the resultative and stative verb forms: the latter do not imply any previous action, but “may denote natural, primary states” (Nedjalkov and Jaxontov 1988: 6). In Tima this differentiation finds reflection in terms of distributional peculiarities: states that do not involve the implementation of a previous action receive a distinct linguistic coding and are treated as adjectives. Compare the resultative construction and the adjectival stative construction:

<i>pòkàà</i>	<i>àm-pèèr-èk=à-ḡáη</i>	vs.	<i>pòkàà</i>	<i>á-pèèr-èl</i>
knife	PERF3-sharpen-RES=SOURCE=LOC3P		knife	STAT.SG-sharp-MID
‘The knife has been sharpened’ (resultative)			‘The knife is sharp’ (stative)	

The former phrase necessarily implies that someone sharpened the knife and the resultant state follows from this previous event (i.e. is its logical consequence), whereas the latter form just describes the (inherent) quality of the knife without any linguistically reflected indication of a previous action.

(261) *píná* *céŋ-kàròm* *cíŋí*
 PRON3SG IPFV3-cut cloth
 ‘(S)he is cutting the cloth.’
 (STH20200201 1)

As can be seen from the comparison of the sentences in (260) and (261), the resultative is an argument-structure changing operation that derives a one-place predicate (with one core argument) from a base two-place predicate (with two core arguments). The sole core argument in (260) is the underlying object, of which the state resulting from a preceding event expressed by the base verb (ex. (261)) is predicated in the derived clause. Importantly, the erstwhile agent participant (the underlying subject) is not expressible in the resultative construction (see below). Conforming to the definition given above, resultative verb forms represent accomplishments, i.e. they include in their semantic representation two subevents: the activity leading to the resultant state and the resultant state itself.

To use the terminology employed by Nedjalkov and Jaxontov (1988), resultative constructions in Tima represent objective resultatives, meaning that the derived intransitive subject in the resultative counterpart corresponds to the direct object in the underlying transitive clause.¹²¹

In Tima, all the resultative verb forms are derived from transitive verbs; there are no derivations from base intransitive verbs. For ease of reading, the resultative verbs are represented in separate tables according to the formal properties of the transitive bases. The first group has, in its transitive use, the transitivity marker *-i / -I* (and the allomorphs *-a* and *-ɔ*) in telic contexts, i.e. the direct object follows the verb extended with *-i / -I* (*-a / -ɔ*), e.g.:

(262) *píná* *àŋ-kàrh-i* *fòndòk*¹²²
 PRON3SG PERF3-carve-HT mortar

¹²¹ Other types of resultatives mentioned by the authors include subjective, possessive, oblique-objective, subjective-impersonal, and objective-impersonal resultatives (Nedjalkov and Jaxontov 1988: 8). Since these types are not relevant for Tima, they are not discussed further here.

¹²² In the corresponding atelic predicate, there is no transitivity marker *-i ~ -I*:

píná *ceŋ-kàrh* *fòndòk*
 PRON3SG IPFV-carve mortar
 ‘He is carving a mortar.’
 (STA20200210)

‘He has carved a mortar.’

(STA20200210)

The next table shows the resultative verbs derived from transitive verbs that exhibit the transitivity marking pattern illustrated above.

Table 55. Resultative verbs based on transitive verbs with transitivity marking (in telic contexts)

Resultative construction (PERF3-root-(EP)-RES)	English translation	Transitive base verb (PERF3-root-HT) ¹²³	English translation
<i>àn-dì-ìk</i>	it has been entangled	<i>àn-dì-í</i>	3P has tied it
<i>àn-dl̥wúy-ìk</i>	it has been bent	<i>àn-dl̥wúy-í</i>	3P has bent it
<i>àη-kóřm-òk</i>	it has been cut	<i>àη-kóřm-í</i>	3P has cut it
<i>àn-ř̀lámí-ìk</i>	it has been repaired ¹²⁴	<i>àn-ř̀lámí-í</i>	3P has repaired it
<i>àη-k̀lbúy-ùk</i>	it has been dug out	<i>àη-k̀lbúy-í</i>	3P has dug it out
<i>à-míhí-ìk</i>	it has been smeared	<i>à-míhí-í</i>	3P has smeared it
<i>àn-tìbí-y-àk</i>	it has been filled/(filled itself?)	<i>àn-tìbí-í</i>	3P has filled it
<i>à-m̀n-ùk</i>	3P has been insulted	<i>à-m̀n-í</i>	3P has insulted 3P
<i>àn-cìléη-òk</i>	it has been rinsed	<i>àn-cìléη-í</i>	3P has rinsed it
<i>à-làl̥-òk</i>	3P has been followed	<i>à-làl-á</i>	3P has followed 3P
<i>à-m̀n-í-ìk</i>	it has been cooked	<i>à-m̀n-í-í</i>	3P has cooked it
<i>àn-cìbì-ìk</i>	it has been roasted	<i>àn-cìbì-í</i>	3P has roasted it
<i>à-m̀n-á-èk</i>	it has been found/ traced back	<i>à-m̀n-á-í</i>	3P has found it/traced back
<i>à-m̀ú-ìk</i>	it has been picked/bitten off	<i>à-m̀ú-í</i>	3P has picked at it/ bitten it off
<i>à-mòráy-ìk</i>	the house has been plastered	<i>à-mòráy-í</i>	3P has plastered it

¹²³ The reference to the perfective verb form is due to the fact that in the imperfective form (usually correlating with atelic contexts), the verbs do not have the transitivity suffix, since the suffix *-i/-í* implies the notion of telicity (see 1.3.4.3.1) and, as a consequence, is not compatible with the imperfective situation type. See the Appendix for the complete list of the attested verb forms analyzed for the present investigation.

¹²⁴ The verb form *ř̀slamí-ik* allows two different readings depending on the subject properties of the derived intransitive clause. With an animate subject, the verb form receives a one-participant middle interpretation ‘improved (in terms of social behavior)’. To my current knowledge, this is the only verb in the list of the resultative verb forms that is compatible with two possible readings, i.e. resultative and one-participant middle.

<i>àn-có-òk</i>	it has been pierced (once)	<i>àn-có-ó</i>	3P has pierced it (once)
<i>à-hó-y-òk</i>	it has been hit	<i>à-hó-ó</i>	3P has hit it
<i>à-híbi-ìk</i>	it has been pierced (several times)	<i>a-híbi-í</i>	3P has pierced it (several times)
<i>àm-páyìt-òk</i>	it has been spread out (e.g. a blanket)	<i>àm-páy-í</i>	3P has spread it out
<i>à-rshéy-ìk</i>	it has been supported (e.g. by a pole)	<i>à-rshéy-í</i>	3P has supported it (keep from falling)
<i>àη-kúbùy-ùk</i>	it has been covered	<i>àη-kúbùy-í</i>	3P has covered it
<i>àη-kàrh-ìk</i>	it has been carved	<i>àη-kàrh-í</i>	3P has carved it
<i>àη-kùrùh-ùk</i>	it has been pushed	<i>àη-kùrh-í</i>	3P has pushed it
<i>àn-tùdù-ùk</i>	it has been opened	<i>àn-tùdúw-í/tùdùk</i>	3P has opened it /3P has opened it (iterative)
<i>àn-tùh-ùk</i>	it has been hung up	<i>àn-tùh-í</i>	3P has hung it
<i>àη-kòhór-òk</i>	it has been slaughtered	<i>àη-kòhór-í</i>	3P has slaughtered it
<i>àη-kéén-ìk</i>	it has been grinded (e.g. sorghum)	<i>àη-kéén-í</i>	3P has grinded it
<i>àη-kóṭàk</i>	it has been made, built, prepared	<i>àη-kó-y-ó</i>	3P has made it

The second group contains verbs that do not have any additional marking in their transitive usage, as exemplified in (263):

- (263) *Súzáń àn-tóḍl kìhí*
 Suzan PERF3-clean place
 ‘Suzan has cleaned the place.’
 (STH20190126 1)

The resultatives formed on transitive bases without any transitivity marking are shown in the following table:

Table 56. Resultative verbs with unmarked transitive bases

Resultative construction (PERF3-root-RES)	English translation	Transitive counterpart (PERF3-root-(EP)- (HT/CAUS))	English translation
<i>àn-tàní-ìk</i>	3P has been called	<i>àn-tàná</i>	3P has called 3P
<i>àḡ-kàmùh-ùk</i>	it has been left	<i>àḡ-kàmùh</i>	3P has left it
<i>àn-táán-èk</i>	it has been beaten	<i>àn-táán</i>	3P has beaten it
<i>à-hwàyít-èk</i>	it has been peeled (e.g. potatoes)	<i>à-hwàyá</i>	3P has peeled it
<i>àḡ-kùmún-ùk</i>	it has been found	<i>àḡ-kùmún</i>	3P has found it
<i>àm-póri-ìk</i>	it has been taken	<i>àm-pór</i>	3P has taken it
<i>àḡ-kálòm-èk</i>	it has been bitten	<i>àḡ-kálòm</i>	3P has bit it
<i>àm-ból-èk</i>	it has been forged	<i>àm-ból</i>	3P has forged it
<i>àm-bóráàr-ìk</i>	it has been peeled	<i>àm-bóráàr</i>	3P has peeled it
<i>àn-cédèm-èk</i>	it has been picked up	<i>àn-cédèm</i>	3P has picked it up
<i>àn-cèrcér-èk</i>	it has been written	<i>àn-cèrcér</i>	3P has written it
<i>àn-círèr-èk</i>	it has been brushed (e.g. teeth)	<i>àn-círèr</i>	3P has brushed it
<i>à-hùm-ùk</i>	it (PLUR) has been put	<i>à-hùm</i>	3P has put it (PLUR)
<i>àn-tóól-èk</i>	it has been cleaned	<i>àn-tóól</i>	3P has cleaned it
<i>àḡ-kóhàt-èk</i>	it (field) has been cleared	<i>àḡ-kóhá</i>	3P has cleared it (field)
<i>àn-déé-y-ìk</i>	it has been scooped	<i>àn-dééy-í/ àn-déèk</i>	3P has scooped it
<i>àn-dílàt-ìk</i>	it has been plaited	<i>àn-dílà</i>	3P has plaited it
<i>àm-bàrh-ìk</i>	it has been washed	<i>àm-bàrh</i>	3P has washed it
<i>à-húúr-ùk</i>	it has been poured (out)	<i>à-húúr</i>	3P has poured id (out)
<i>àḡ-kólól-òk</i>	it has been steered	<i>àḡ-kólól</i>	3P has steered it
<i>àḡ-kwààr-ìk</i>	it has been cut (of substances like bread)	<i>àḡ-kwààr</i>	3P has cut it (bread)
<i>àm-pàràt-èk</i>	it has been cleared (of farming land)	<i>àm-pàrà</i>	3P has cleared it
<i>àm-pùríúr-ùk</i>	it has been stirred	<i>àm-pùríúr</i>	3P has stirred it
<i>àm-péèr-èk</i>	it has been sharpened	<i>àm-péèr</i>	3P has sharpened it
<i>àn-tóóy-òk</i>	it (PLUR) has been taken	<i>àn-tóóy</i>	3P has taken it (PLUR)
<i>àn-tóór-èk</i>	it has been poured	<i>àn-tóór</i>	3P has poured it (e.g. beans, flour)
<i>àn-tódòh-èk</i>	it has been cracked open	<i>tódòh</i>	open it by cracking (usually of eggs)

The transitive counterparts in the third group have in their stems a semi-frozen causative marker bearing the transitivity marking function (see section 3.2.3), i.e. there are no corresponding unmarked verb forms (see below on the peculiarities of the resultative derivation with this group of base verbs). The next example demonstrates the pattern described:

- (264) *kλhúnén* *àη-káhúk* *íídí* *náhi*
 woman PERF3-pour:CAUS water on.the.ground
 ‘The woman has poured water on the ground.’
 (STH20190128 1)

Table 57. Resultative verbs from transitive verbs marking transitivity with -Vk

Resultative construction (PERF3-root-(EP)-RES)	English translation	Transitive counterpart (PERF3-root.CAUS)	English translation
<i>àn-tété-w-òk</i>	it has been chopped (e.g. meat)	<i>àn-tétèk</i>	3P has chopped it
<i>àn-dáṭò-òk</i>	it has been winnowed	<i>àn-dáṭòk</i>	3P has winnowed it
<i>àn-táṛò-òk</i>	it has been cleaned (of farming land)	<i>àn-táṛòk</i>	3P has cleaned it (farming land)
<i>àη-káhú-ùk</i>	it has been poured	<i>àη-káhúk</i>	3P has poured it
<i>à-ηóḷò-òk</i>	it has been scooped	<i>à-ηóḷòk</i>	3P has scooped it
<i>àn-ṭúdú-ùk</i>	it has been uncovered/opened	<i>à-ṭúdúw-ì/ṭúdúk</i>	3P has uncovered/opened it /3P has uncovered/ opened it (iterative)
<i>àn-ṭólì-ìk</i>	it has been damaged by treading/ trampled (e.g. field)	<i>àn-ṭólòk</i>	3P has damaged it by treading (e.g. field)
<i>à-hìl-ṭ-ìk</i> ¹²⁵ <i>à-hìl-ìk</i>	it has been felled they have been felled	<i>à-hìl-ìk</i>	3P has felled it

The last group consists of three verbs (attested so far) that exhibit labile morphosyntactic behavior, i.e. the same verb form is used in both transitive and intransitive clauses:

¹²⁵ The distinction of the resultative forms of the verb *hìl -ìk* ‘fell’ with singular and plural subjects is the only instance where the element *-ṭ-* is used with the singular as opposed to the plural subject, which lacks *-ṭ-*. All the other verbs containing *-ṭ-* in the resultative form do not show such a distinction.

(265) *píná à-hòwánṭ-ḡk tóḡr* vs. *tóḡr à-hòwánṭ-ḡk*
 PRON3SG PERF3-empty-CAUS pot pot PERF3-empty-RES
 ‘She has emptied the pot.’ ‘The pot has been emptied.’
 (STH190129 1)

Table 58. Resultative verbs with labile behavior

Resultative construction	English translation	Transitive counterpart	English translation
<i>àn-dúnkùrùk</i>	it has been piled up	<i>àn-dúnkùrùk</i>	3P has piled it up
<i>à-hòwánṭ-ḡk</i>	it has been emptied	<i>à-hòwánṭ-ḡk</i>	3P has emptied it
<i>àḡ-kwòḡḡk</i>	it has been shaken	<i>àḡ-kwòḡḡk</i>	3P has shaken it

The resultative derivation is a very productive and regular morphological process in Tima. Especially telling in this regard is the derivation from transitive verbs with the suffix *-Vk* in their stem that do not have a corresponding unmarked verb (where the suffix *-Vk* marks transitivity; see Table 57). Consider the following example pair for illustration:

(266) *yáḡhúnén cén-tétèk yábòh*
 PL.woman IPFV3-chop.CAUS meat
 ‘The women are chopping meat.’
 (STA20200206)

(267) *yábòh àn-tétè-w-òk=à=ṭáḡ*
 meat PERF3-chop-EP-RES=SOURCE=LOC3P
 ‘The meat has been chopped.’
 (STA20200206)

The resultative construction in (267) has a longer stem than the corresponding transitive verb in (266): the resultative preserves the root final vowel *ε*, whereas in the transitive counterpart, the root final vowel and the vowel of the suffix *-Vk* merge together, resulting in a shorter form. In contrast to the transitive verb (ex. (266)), the morpheme boundary in the resultative verb form (ex. (267)) is clearly delineated: the verbal root is separated from the suffix by an

epenthetic element *-w-*. Resultative verb forms without an epenthetic element have a long vowel resulting from the suffix vowel following the root vowel. In contrast to the transitive counterpart, in the resultative verb form, these vowels do not merge. Compare the transitive verb in (268) and the corresponding resultative form in (269):

(268) *yàhúnén* *àn-dáṭòk* *yéèh*
 PL.woman PERF3-winnow:CAUS sorghum
 ‘The women have winnowed sorghum.’
 (STA20200211 1)

(269) *yéèh* *àn-dáṭó-òk*
 sorghum PERF3-winnow-RES
 ‘The sorghum has been winnowed.’
 (STA20200211 1)

As can be observed from the tables above, each resultative verb form has a transitive counterpart. The semantic relationship between the alternating forms is transparent; there are no idiosyncratic readings associated with the derived form. As Nedjalkov (2001: 930) puts it, “the meaning of the resultative always directly depends on the lexical meaning of the base verb, being a component of the latter meaning.” Indeed, resultative constructions represent the only group of verb forms in Tima where no lexicalizations exist or idiosyncratic meanings occur in the derived counterparts.

The only exception to the regular formation of the resultative construction attested so far is the form *àḡ-kóṭàk* ‘be made’, corresponding to the transitive verb *kóyó* ‘make it’:

(270) *pínà* *àḡ-kó-y-ó* *kùdùḡkùdùḡ*
 PRON3SG PERF3-make-EP-HT granary
 ‘He has built a granary.’
 (STH20200207 1)

(271) *kùdùḡkùdùḡ* *àḡ-kóṭàk=à=ṭáḡ*
 granary PERF3-is.made=SOURCE=LOC3P
 ‘The granary has been built.’
 (STH20200207 1)

Now that the formal properties have been outlined, the next subsection focuses on the semantic aspects of resultative derivation by means of the suffix *-Vk*.

3.3.3.2 Semantic aspects of the resultative derivation

The present section looks first at the lexical constraints on the eligible verb bases and then explores the semantic properties of the derived construction.

The lexical restrictions on the base verbs suitable for the resultative derivation in Tima concern their valency and lexical aspect. Concerning the basic valency, it is, as mentioned earlier, a requirement for the base verb to have a transitive argument structure, with a subject and a direct object as obligatory core arguments. The subject has an agentive semantic role; that is, the participant in the subject position of the base transitive verb must be capable of willful actions upon another participant, effecting a visible change in that second participant. Using the semantic feature specification model employed by Næss (2007; see 1.2.2.3), the participant in the subject position of the base verb can be represented as [+VOL, +INST, -AFF], i.e. it should be a prototypical agent. With regard to the semantic entailments of the verb responsible for argument selection (which can predict the potential participation in the resultative derivation), the property ‘causing an event or change of state in another participant’ attributed to the Agent proto-role, as suggested by Dowty (1991: 572), is relevant to transitive base verbs in Tima.

For resultative derivation in Tima, it is crucial that the change in another participant necessarily results from the willful action of an external agent.

This requirement concerning the Agent specifying property indicates that, among the transitive bases for the resultative derivation, we should expect lexical causative verbs. Indeed, individual verbs that allow the resultative derivation represent lexical causatives. Such are the verbs *d̀̀wíy* ‘bend’, *k̀̀ç̀̀m* ‘cut’, *ç̀̀lámí* ‘repair’, *có* ‘pierce, stab (once)’, *híbí* ‘stab (many times)’, *ç̀̀dú* ‘open’, and *péèç* ‘sharpen’. Overall, however, the proportion of the lexical causatives among the verbal bases of the resultative verbs is relatively small (seven out of 69 verbs attested so far).

The participant encoded as a direct object with the base verb exhibits patientive semantic characteristics. In terms of semantic feature specification, it can be characterized as

[-VOL, -INST, +AFF]. Predominantly, the referent of the underlying direct object is inanimate, hence, logically [-VOL]. However, with individual verbs, [-VOL] means only the absence of volitional involvement in the action described by the verb. It does not, in this case, exclude sentience; i.e. the direct object participant can be a sentient being as, for example, with the verb *tàná* ‘call’, which forms the resultative *tàní-ík* ‘be called’. In terms of the entailments of the verb selecting the participant in the DO position, such Patient proto-role properties (Dowty 1991: 572) that are relevant include:

- a) undergoing a change of state;
- b) being causally affected by another participant.

The second property, being causally affected by another participant, is a key factor in the eligibility of a particular verb to participate in the resultative alternation in Tima. This characteristic excludes verbs expressing internal causation from the resultative derivation. Consider the following proposition:

- (272) *kòbà àŋ-kùbù-y-ùk=à=táŋ*
 hole PERF3-dig-EP-RES=SOURCE=LOC3P
 ‘The hole has been dug out.’
 (STH20200201 2)

The only available interpretation applicable for (272) is that the hole came into being through the willful act of an external participant; it is impossible to interpret the sentence in (272) as an event that occurred spontaneously, i.e. as a result of some natural process without the intervention of an external agent. This specification – the requirement for an external agent who brought about the change described by the resultative predicate – is applicable to all attested resultative verbs.

As shown below in Section 3.3.4 on the anticausative derivation, the transitive verbs that select the patient argument without the requirement ‘being causally affected by another participant’, thus allowing internally-caused verbs, have a distinctive distribution in the linguistic system of Tima. The conceptual structure of the resultative construction excludes the possibility of an autonomously occurring resultant state.

Concerning lexical aspect (or eventuality types, as defined by Vendler 1957), the base verbs participating in the resultative alternation can be generally characterized as [-state]. Moreover, the overwhelming majority of attested resultative verbs have as their base verbs either

accomplishments or activities. Examples of the base verbs specified as [+accomplishment] are *kó* ‘build, make’, *dí* ‘tie’, *ṣ̀lámí* ‘repair’, *kùbúy* ‘cover’, etc. Basically, the verbs in Table 55 that employ the transitivity (telicity) marker *-i / -I* to render the predicate telic can be characterized as accomplishments. Note, however, that these verbs receive an activity reading with imperfective morphology and a plural object or when derived for antipassive (see 2.4 on the antipassive derivation). The next example pair illustrates the point:

(273) *píná* *céṅ-kàrh* *ífóndòk*
 PRON3SG IPFV3-carve PL.mortar
 ‘He is carving mortars.’
 (STH20200209 2)

(274) *píná* *céṅ -kàrh-àk*
 PRON3SG IPFV3-carve-AP
 ‘He is carving.’
 (STH20200209 2)

Example (273) illustrates the atelic reading yielded by the combination of the imperfective prefix of the verb and the plural direct object, while example (274) receives an atelic reading through the usage of the antipassive derivation, which precludes the expression of the direct object, thus rendering the event unbounded, and hence atelic. The extension of the same verb with the transitivity/telicity marker *-i*, after which the direct object is obligatory, yields a telic reading:

(275) *píná* *àṅ-kàrh-i* *fóndòk*
 PRON3SG PERF3-carve-HT SG.mortar
 ‘He has carved a mortar.’
 (STH20200209 2)

The base verbs that do not formally distinguish between telic and atelic verbs (i.e. by means of the transitivity marker *-i / -I*, with allomorphs) more readily invite the activity reading. For example, *ṣ̀d̀l* ‘clean’, *bàrh* ‘wash’, *tétèk* ‘chop’, etc.

Only a couple of achievement (i.e. punctual) verbs have been attested as having resultative verb forms: *ṣ̀l* ‘finish’, *kùmín* ‘find; see’.

This observed tendency for the base verbs to be accomplishments or activities might be due to the morpholexical operation involved. As was defined above (3.3.3.1), the resultative construction in Tima expresses an acquired state of a patient-like participant resulting from a previous action performed by an external agent-like participant. That is, the resultative construction represents a bi-eventive structure consisting of the action (event 1) and the resultant state (event 2). After the resultative derivation, both activity- and accomplishment-based predicates receive an accomplishment interpretation, whereby the resultant state serves as a boundary to the activity denoted by the lexical root.

States and achievements, in contrast, are not eligible (or are less eligible, in the case of achievements) for the resultative derivation since they lack such semantic components as ‘dynamic, going on in time’ that could culminate in a particular resultant state. With regard to the attested achievement base verbs, we can also assume that the resultative derivation coerces a specific reading pattern onto the base verb, whereby the action phase (event 1) receives a sense of dynamicity. And of course, the option cannot be ruled out that in Tima, the lexical scope of the verbs *ɬʂl* ‘finish’, *kùmún* ‘find; see’ (the only achievement verbs attested so far) reaches beyond their English equivalents and is easily compatible with a dynamic (i.e. non-instantaneous) reading.

To conclude this overview of the semantic aspects of the resultative derivation, we can state that the resultative derivation is applicable to transitive verbs expressing the physical actions of an agentive participant upon a patientive participant. The resultative construction based on such verbs denotes a state of affairs where “the visual state of a thing or a person allows us to deduce the particular action (or process) that has brought it about” (Nedjalkov and Jaxontov 1988: 28). For example, when the cloth is cut (ex. (276)), it means that someone has cut it before (ex. (277)):

(276) *cìṽ* *àṽ-kòròṽm-òk*
 cloth PERF3-cut-RES
 ‘The cloth has been cut.’
 (STH20200201 1)

(277) *píná* *àṽ-kòròṽm-í* *cìṽ*
 PRON3SG PERF3-cut-HT cloth
 ‘She has cut the cloth.’
 (STH20200201 1)

The next section briefly overviews the potential reading associated with the resultative derivation and its conditions.

3.3.3.3 Resultative derivations with potential reading

Until now, I have not discussed the TAM morphology associated with the resultative derivations. In the tables presented above in 3.3.3.1, all the resultative verb forms have perfect tense morphology (for 3rd person), i.e. the prefix *àN-* (see 1.3.4.2.2 on TAM expressing mechanisms in Tima). Based on the linguistic data investigated, this usage, i.e. with the perfective aspect, can indeed be claimed as the dominant one with the resultative derivation. This appears to be a logical correlation, since the resultatives predicate a resultant state caused by a previous, i.e. past, action. Yet, with some verbs, the resultative derivation is also compatible with non-past tense/aspect and potential mood morphology. Thus-marked resultatives receive a potential reading. The following examples serve as an illustration:

(278) *kímámìn* *kì-mìnánè-èk*
 elephant POT-find-RES
 ‘The elephant can be found/traced.’
 (Dimmendaal and Schneider-Blum, in prep.: ch. “The Verb”)

(279) *kìràṽ* *kó-dón-tòlòk=à=táṽ*
 field POT-FUT3-trample-RES=SOURCE= LOC3P
 ‘The field can be damaged by treading (e.g. by cows):’

(STA20200206)

- (280) *còràŋ* *à-hól* *cé-dłwúy-ik*
SG.stick STAT.SG-easy IPFV3-bend-RES
'The stick can be bent easily.'
(STA20200206)

In examples (278) and (279) above, the verb is prefixed by the potential mood prefix *kV-*; in (279), the potential marker is then followed by the future marker *dʒn-*. Example (280) illustrates the resultative construction with imperfective morphology.

Yet, despite the non-past morphology in the sentences above, the resultative semantic component is still present in the predication – as a resultant state potentially acquired in the future or due to some hypothetical or context-conditioned circumstances (comparable perhaps to the Futur II in German, the so-called Future Perfect).

As mentioned earlier, the construction of resultatives with non-past morphology yielding a potential reading is available only with some verbs. That not all verbs permit the construal of potential predicates with resultative verbs may be due to the agent-oriented semantics of the resultatives. That is, for some reason, perhaps residing in cognitive principles, it is less easy to construe an event implying an agent, albeit only implicit (i.e. the resultative event type), as an irrealis or a non-actualized event without mentioning this agent (which is inexpressible with resultatives in Tima).

3.3.3.4 The structural properties of resultative constructions in Tima

Now we should consider the features of resultative constructions on the clausal level and, related to this, their delineation from similar categories, such as, e.g., the canonical passive as described in the literature.¹²⁶ That is, at first glance, the resultative construction appears very similar to the passive: as defined above (section 3.3.3.1), the resultative construction is a deagentivizing morphosyntactic operation, whereby the erstwhile direct object surfaces as the

¹²⁶ In Tima, there is no passive of the type that can be called canonical, i.e. a construction with an underlying object promoted into the subject position and the possibility of re-introducing the agent into the surface representation.

subject of which the state is predicated. The original subject of the underlying transitive verb is eliminated from the argument structure. Similarly, the canonical passive presupposes that the syntactic subject is not the agent of the action denoted by the underlying transitive verb. Thus, the resultative as described here for Tima and the (prototypical) passive show a substantial degree of semantico-structural overlap. However, resultative constructions in Tima exhibit features that necessitate their differentiation from the passive. Most saliently, the resultative in Tima prohibits the reintroduction of the underlying agentive subject into the argument structure of the derived predicate. Hence, the addition of the agentive participant from the underlying transitive clause in (281) through an oblique NP in the derived resultative in (282) would be ungrammatical:

- (281) *yλhúnén àm-pàrá kìràŋ*
 PL.woman PERF3-clear.field field
 ‘The women have cleared the field.’
 (SHT20200201 4)

- (282) *kìràŋ àm-pàráṭ-èk *ŋ=λhúnén¹²⁷*
 field PERF3-clean-RES INS=PL.woman
 ‘The field has been cleared *by the women.’
 (SHT20200201 4)

With the passive, on the contrary, it is always possible to express the underlying agent, usually by means of an oblique NP (e.g. Alexiadou et al. 2006: 176; Haspelmath 1987: 7; Dixon and Aikhenvald 2000: 7).

The resultative constructions in Tima can, however, be extended with instrumental, beneficiary, and purpose expressions. The following sentences exemplify these usages:

- (283) *íbí à-híl-ìk=à=ṭáŋ ŋ=káwàk*
 PL.tree PERF3-fell-RES=SOURCE=LOC3P INS=axe
 ‘The trees have been cut with an axe.’
 (STA20200212 2)

¹²⁷ The choice of the instrumental marker in this hypothetical example is based on analogy with other languages that employ a grammatical marker with the instrumental meaning to introduce the agent in the passive construction.

- (284) *yábóh à-míní-ik=ṭáṅ=íí íí=wàkwòlóló*
 meat PERF3-cook-RES=LOC3P=APPL DAT=big
 ‘The meat has been cooked for the chief.’
 (STA20200208 2)
- (285) *íbí àṅ-kòṛòṁ-òk=à=ṭáṅ mée-kóy-áá kùrtú*
 PL.tree PERF3-cut-RES=SOURCE=LOC3P OPT-make-INS SG.house
 ‘The trees have been cut to build a house.’
 (STA20200212 2)

The capability of the resultatives to take the clausal extensions exemplified by the sentences in (283)-(285) is determined by the agent-oriented semantics of these constructions. To repeat, the resultative alternation is associated with a conceptual structure of the underlying event that presupposes an agentive, mostly willful, i.e. [+VOL, +INST, -AFF] participant bringing about the resultant state predicated in the derived construction. So, even though the underlying agent is not expressible in the resultative (in contrast to the passive), its presence in the conceptual structure is recoverable through agent-oriented clausal extensions. So, for example, instruments (ex. (283)) are normally manipulated by agentive willful participants in order to bring about an action upon another participant. The beneficiary (ex. (284)) and purpose ((285)) determining phrases likewise imply a participant capable of having a particular goal (i.e. beneficiary) or purpose in mind while carrying out the action denoted by the verb.

I would like to close the discussion of the resultative derivation in Tima and its relationship to the prototypical passive by referring to the related constructions in Bantu languages that involve the apparently cognate morpheme *-Ik* (related to the Proto-Bantu neuter-passive (see e.g. Dimmendaal 2018: 397)) mentioned earlier in 3.1. The functional similarity of the latter (aside from its obvious formal resemblance) to the Tima suffix *-Vk* is especially conspicuous precisely with the resultative usage. In many Bantu languages, the suffix *-Ik* is reported to perform deagentivizing and intransitivizing functions similar to the resultative in Tima: the derivation from the base transitive verb results in an intransitive predicate where the subject corresponds to the initial direct object (e.g. Dom et al. 2016). Mchombo (1993: 5) gives the following definition:

There is a construction in Bantu languages that normally involves the suffixation of a morpheme with the phonological shape of *ik*, or *-ik-* and *-ek-* [...] to the verbal radical, that has traditionally

been referred to as the “stative construction”. The most salient condition of the affixation of the suffix is that the base verbal radical be a transitive verb. The immediate effect of adding this extension is that the erstwhile object of the base verb becomes the subject and the subject of the base verb does not get expressed at all.

Mchombo (ibid.) also mentions such labels as quasi-passive, descriptive passive, and neuter-passive, among other names given to the related constructions in different Bantu languages. That is, depending on its interaction with other categories existing in particular languages, the functions associated with the morpheme in question can be referred to by various names. Still, the similarity to a prototypical passive can be inferred from the labels chosen by the authors to describe the functional scope of the Bantu suffix *-Ik*. The construction in the Bantu language Chewa (Malawi) can be illustrated in the following example (Dubinsky and Simango 1996: 751, cited in Dom et al. 2016: 132):

(286) *m-bale* *zi-na-ttuk-ik-a* (**ndi Naphiri*)
 CL₁₀-plate SM₁₀-PST-wash-NT-FV by Naphiri
 ‘The plates were washed (*by Naphiri).’

Dom et al. (2016: 133) refer to the usage exemplified by (286) as an agentless passive. As in Tima, the reintroduction of the initial agent is not allowed in the derived construction.¹²⁸

The resultative function performed by the suffix *-Vk* in Tima differs from the functional scope of the Pan-Bantu deagentivizing suffix *-Ik* in some respects. For example, in Bantu, the same morpheme with the same structural distribution is also used in spontaneous events. That is, the resultant states that do not necessarily imply an external force to be brought about can also be expressed through derivation with the suffix *-Ik* in Bantu (Guthrie 1962; Bokamba 1981; Mchombo 1993; Creissels 2002, among many others). As will be shown below in 3.3.4 on the anticausative derivation (describing spontaneous eventualities), the morpheme *-Vk* is used in complementary distribution with another derivational suffix *-Vl*¹²⁹, where *-Vk* is only used in

¹²⁸ Noteworthy, in the Bantu language Tumbuka (Malawi), the morpheme *-Ik* extended its functional scope „so as to include passive proper“. That is, in this language, the prohibition of an overt agent phrase (introduced as an oblique NP by means of the comitative preposition *na*) no longer exists (Chavula 2016: 65, cited in Dom et al. 2016: 134).

¹²⁹ The suffix *-Vk* is in complementary distribution with the suffix *-Vl* in atelic vs. telic contexts, in such detransitivizing functions as the anticausative (section 3.3.4) and the one-participant middle (section 3.3.5). See also a brief overview of the distribution of the suffix *-Vl* in 3.3.6.

atelic constructions, and *-Vi* in telic constructions. The pan-Bantu *-Ik*, in contrast, does not show such divergence.

Another difference in the distribution between the Tima suffix *-Vk* in its resultative function and the assumed Bantu cognate *-Ik* concerns its compatibility with other derivational elements. In Tima, no additional valency-changing morphemes can cooccur with *-Vk* (obviously, only valency-increasing morphemes can potentially be an option, since *-Vk* reduces valency, yielding an intransitive verb, and it is not possible to decrease the valency of intransitive verbs). In Bantu languages, no such restriction exists. Mchombo (1993: 11ff), for example, provides some instances of verbs extended by detransitivizing *-Ik* and a causative suffix. This difference in morphosyntactic behavior can be accounted for by the structural difference: in Bantu languages, there is a dedicated causative suffix formally distinct from the detransitivizing suffix *-Ik*, namely *-ici* (with varying realization patterns across Bantu languages). In Tima, by contrast, the causative, in its valency increasing and detransitivizing (subject deleting) function, is encoded by the assumedly one and the same morpheme (from a synchronic point of view).

3.3.3.5 Conclusion

The resultative derivation by means of the suffix *-Vk* in Tima is a deagentivizing and detransitivizing morphosyntactic operation, whereby the underlying syntactic object in the base transitive predicate gets promoted into the subject position in the derived intransitive clause. The initial agent participant is eliminated in the surface representation of the derived predicate and cannot be expressed by means of an oblique NP. The agent-oriented semantics of the verbs participating in the resultative derivation is recoverable through the acceptability of the instrumental, beneficiary, and purposive causal extensions.

The resultative constructions – true to their label – describe resultant states brought about by, i.e. resulting from a previous action. Correspondingly, in most cases, resultative verb forms are predominantly used with perfective verbal morphology.¹³⁰

¹³⁰ This association between the resultative reading of the morpheme *-Vk* and the perfective morphology is likewise reported for Bantu languages that employ the assumedly cognate morpheme *-Ik* to express resultant states, e.g. in Swahili (Brauner and Herms 1978: 28.1, cited in Haspelmath 1987: 32).

The resultative derivation in Tima is a highly productive process. The 69 verbs attested most probably do not exhaust the possible resultative forms. The general requirements for the base verbs are their bivalent argument structure, having an agent and a patient encoded as the subject and object, respectively. In terms of the lexical aspect, there is a condition requiring the bases to be accomplishments or activities. Achievements are highly dispreferred for the resultative derivation, and verbs characterized as [+states] cannot participate in the resultative derivation at all. It is noteworthy that in the closely related language Julut, the cognate morpheme – the derivational suffix *-kak* – is also reported to perform a function (labeled anticausative) akin to the resultative described here for Tima (Nüsslein 2020: §3.4.5). That is, in Julut, the morpheme *-kak* (also bearing a causative function, similar to Tima) serves to detransitivize the underlying bi-valent predicate promoting the initial object into the derived subject position. As with the resultative derivation in Tima, the base verbs for the anticausative derivation by means of the derivational suffix *-kak* in Julut are [-state]. In Julut, the constructions corresponding to Tima resultatives likewise prohibit the expression of the agentive participant through an overt NP.

In Tima, the resultant constructions receive an accomplishment reading after derivation irrespective of the lexical aspect of the base verb. Indeed, in a considerable number of attested cases, resultative predicates contain a marker implying a completive reading – the cliticon $=a=ʔaŋ$, a composite morpheme consisting of a source marker $=a$ and the 3rd person locative applicative $=ʔaŋ$ (see 1.3.4.3.5), for example:

- (287) *iwòkàà* *àm-péèr-ə̀k=à=ʔáŋ*
 PL.knife PERF3-sharpen-RES=SOURCE=LOC3P
 ‘The knives have been sharpened.’
 (STH20200203 2)

Interestingly, even with a potential reading indicated by the imperfective morphology, the marker of completion can occur (according to the Tima speakers who provided the sentences, the omission of the marker $=a=ʔaŋ$ is still acceptable). Consider the following example (repeated):

- (288) *kìràŋ* *kə̀-də̀n-ʔl̀k=à=ʔáŋ*
 field POT-FUT3-trample-RES=SOURCE=LOC3P
 ‘The field can be damaged by treading (e.g. by cows).’
 (STA20200206)

The next section is devoted to the usage of the derivational suffix *-Vk* in similar, i.e. detransitivizing operations: the anticausative and the one-participant middle. As will be shown in the respective sections, these two usages involve classes of verbs different from those serving as bases in the resultative alternation. Apart from the different semantic characteristics associated with the verbal bases of the resultative derivation, these two other functions exhibit distinct patterns of morphosyntactic behavior.

3.3.4 Anticausative function

3.3.4.1 General overview

The anticausative construction represents the intransitive marked member of causal/non-causal alternation (e.g. Haspelmath 1987, 1993). The following example pair illustrates such an alternation in Tima, where example (289) shows the unmarked causative predicate, from which the semantically related anticausative predicate is derived (ex. (290)):

(289) *kìnèè* *àn-tìláy* *ímààdìk*
 sun PERF3-melt PL.butter
 ‘The sun has melted the butter (in several places).’
 (STH20190128 1)

(290) *ímààdìk* *àn-tìláy-ìk*
 PL.butter PERF3-melt-ACAUS
 ‘The butter melted (in several places).’
 (STH20190128 1)

As formulated by Haspelmath (1987: 3) in his definition of the anticausative construction, the semantic relationship between the verbs in (289) and (290) is the same as in the causative alternation, yet the direction of derivation is reversed here in that it is the non-causal verb that is a marked member, hence the term ‘anticausative’. That is, the alternation demonstrated in (289) and (290) represents a causal/non-causal alternation with a marked non-causal member.

Also, from a morphosyntactic point of view, the alternations represent transitive/intransitive pairs based on the same roots, with the anticausative being the intransitive member.¹³¹

As seen from the example sentences in (289) and (290) above, here we are dealing with a morphosyntactic operation involving the intransitivization of the underlying transitive predicate, whereby the underlying direct object moves into the subject syntactic position. That is, from the morphosyntactic point of view, the anticausative derivation shows the notional resemblance to the resultative derivation by means of the suffix *-Vk* discussed above in section 3.3.3. There, the intransitive counterpart also constitutes the marked member of the transitive/intransitive alternation, and the underlying direct object is promoted into the derived subject position.

Yet the anticausative derivation manifests important differences from the superficially identical resultative construction. The discrepancy between these two construction types obtains both on structural and semantic levels. The essential semantic difference pertains to the conceptual outline associated with the anticausative construction as compared to the resultative construction. Anticausative constructions describe such change-of-state events as can happen without an outside force, i.e. they represent internally caused events, though this basic condition does not prohibit the construal of a change-of-state event involving some external force (Langacker 1991; Næss 2007; Koontz-Garboden 2009). With the resultative derivation, on the other hand, the conceptual structure always involves an agentive outside force bringing about the change of state predicated in the derived construction (see 3.3.3.2).

The major structural difference concerns the distinct marking of anticausatives in atelic as opposed to telic constructions. The suffix *-Vk* generally marks only atelic anticausative constructions; the telic anticausatives use another derivational suffix, *-Vl* (the details will be explained below in 3.2.6). For this reason, I use the gloss ACAUS.ATEL (atelic anticausative) for the suffix *-Vk* in its anticausative function (the suffix *-Vl*, correspondingly, is glossed as ACAUS.TEL – telic anticausative). The semantic properties of the anticausative derivation are explored below in 3.3.4.2, and the structural properties are dealt with in section 3.3.4.3.

¹³¹ As noted earlier (3.2.2.2), so far, only one suppletive pair of semantically related causative/non-causative alternation has been attested in Tima, i.e. different roots expressing causative and non-causative semantic counterparts: *tòmó* ‘kill’ and *búlúk* ‘die’. Interestingly, *búlúk* ‘die’ is a lexicalized verb that contains the petrified suffix *-Vk*, here realized as *-uk*.

3.3.4.2 Semantic properties of the anticausative derivation

The present section explores semantic aspects of the anticausative derivation and also of the base verbs participating in the anticausative alternation. The following table lists the attested anticausative verbs; the causative transitive bases are given in the first column. Since the verbal roots may have different forms depending on the aspect (telic vs. atelic) of the predicate they are used in, both of these forms, i.e. atelic and telic, are given separated by the slash sign. The atelic and telic anticausative derivations are given in separate columns.

Table 59. Anticausative verbs with the suffix *-Vk*

Verb base (atelic/telic form (root-(EP)-HT))	English gloss	Atelic ACAUS derivation (TAM3-root-(EP)-ACAUS.ATEL)	English translation	Telic ACAUS derivation (PERF3-root-(EP)-ACAUS.TEL)	English translation
<i>bàrárà-àk</i> ¹³² / <i>bàrà-y-í</i>	tear it	<i>cém-bàrárà-y-ìk</i> ; <i>àm-bàrárà-y-ìk</i>	it tears; it got torn (in many places)	<i>àm-bàrà-y-ìl</i>	it got torn
<i>cìm/ cìm-í</i>	gather it	<i>cén-cìm-òk</i>	3P (PL) are gathering/ ¹³³ it (e.g. rubbish) gathers	<i>àn-cìm-òl</i>	3P gathered
<i>dùmúy-í</i>	reduce it, lower it	<i>cén-dùmúy-ìk</i> ; <i>àn-dùmúy-ìk</i>	it (SG/PL) reduces, gets less intense; it (PL) reduced, got less intense	<i>àn-dùmúy-ìl</i>	it (SG) reduced, got less intense

¹³² Here, the suffix *-àk* marks atelicity. See 2.4.5 for the atelicity marking function of the suffix *-àk / -ak*.

¹³³ The derivation from the verb *cm* ‘gather’ allows, aside from the anticausative reading, a middle interpretation when the derived subject is animate, e.g.:

ihwàà cèn-cìm-òk
people IPFV3-gather-ACAUS.ATEL
‘The people are gathering.’

ihwàà àn-cìm-òl
people PERF3-gather-ACAUS.TEL
‘The people have gathered.’
(STH20200201 2)

From the whole list in Table 59, this is the only verb that is compatible with two possible readings (i.e. anticausative or middle) depending on the semantic properties of the referent of the derived subject.

<i>kidímé-y-í</i>	close it	<i>àḡ-kidímé-èk</i>	it (PL) closed	<i>àḡ-kidímé-èl</i>	it (SG) closed
<i>mḡnà/mḡné-y-í</i>	take off from it	<i>à-mḡné-y-ìk</i>	it (PL) reduced, got smaller	<i>à-mḡné-y-ìl</i>	it (SG) reduced, got smaller
<i>mìrn/mìrn-í</i>	divide, separate	<i>cé-mìrn-ìk;</i> <i>à-mìrn-ìk</i>	it (SG/PL) divide(s); it (PL) divided	<i>à-mìrn-ìl</i>	it (SG) divided
<i>pìlḡ-í</i>	expand it	<i>cém-pìlḡ-ìk</i> <i>àm-pìlḡ-ìk</i>	it (SG/PL) expand(s) it (PL) expanded	<i>àm-pìlḡ-ìl</i>	it (SG) expanded
<i>ḡyá</i>	open it	<i>cén-ḡyáḡ-ùk;</i> <i>àn-ḡyáḡ-ùk</i>	it (SG/PL) open(s); it (PL) opened	<i>àn-ḡyáḡ-ùl</i>	it (SG) opened
<i>púr-í</i>	warm it up	<i>àm-púrù-ùk</i>	it (PL) warmed up	<i>àm-púrù-ùl</i>	it (SG) warmed up
<i>rí-í</i>	change it	<i>à-rí-ìk</i>	it (PL) changed	<i>à-rí-ìl</i>	it (SG) changed
<i>ḡámìḡ/ ḡámìḡ-í</i>	roll it up	<i>cé-ḡámìḡ-ìk</i> <i>à-ḡámìḡ-ìk</i>	it (SG/PL) is/are rolling up, curling up; it (PL) rolled up, curled up	<i>à-ḡámìḡ-ìl</i>	it (SG) rolled up, curled up
<i>tóbór/ tóbór-í</i>	unroll it, unwind it, deconstruct it	<i>cén-tóbór-èk;</i> <i>àn-tóbór-èk</i>	it (SG/PL) is/are unrolling, unwinding; it (PL) unrolled, unwound	<i>àn-tóbór-èl</i>	it (SG) unrolled, unwound
<i>tòḡh-á</i>	burst it	<i>àn-tòḡh-èk</i>	it (PL) exploded	<i>àn-tòḡh-òl</i>	it (SG) exploded
<i>tón(tòn)/ tóní</i>	break it (e.g. stick)	<i>àn-tóní-ìk</i>	it (PL) broke	<i>àn-tóní-ìl</i>	it (SG) broke
<i>táán/ tónà</i>	break it (e.g. pot)	<i>àn-táán-èk</i>	it (PL) broke	<i>àn-tónè-èl</i>	it (SG) broke
<i>pìḡ/ pìḡ-í</i>	fire it, shoot it	<i>àm-pìḡ-ìk</i>	it (PL) sparkled, flashed	<i>àm-pìḡ-ìl</i>	it (SG) sparkled, flashed
<i>túrúw-í</i>	burst it	<i>àn-túrú-ùk</i>	it (PL) burst	<i>àn-túrú-ùl</i>	it (SG) burst
<i>tòḡtòḡ/ tùúḡ-á</i>	crush it, crumble it	<i>àn-tòóḡ-ìk</i>	it (PL) got crushed/crumbled	<i>àn-tòóḡ-ìl</i>	it (SG) got crushed/crumbled
<i>tḡrárà-àk/ tḡráy-í</i>	crack it	<i>àn-tḡrárà-àk</i>	it (SG) cracked (in several places), it (PL) cracked	<i>àn-tḡráy-ìl</i>	it (PL) cracked (once)
<i>tìlán/ tìlán-í</i>	melt it	<i>àn-tìlán-ìk</i>	it (PL) melted	<i>àn-tìlḡ-ìl</i>	it (SG) melted
<i>ḡùh/ ḡùh-í</i>	pull it	<i>cén-ḡùh-ùk;</i> <i>àn-ḡùh-ùk</i>	it (SG) appears, comes out; it (PL) appeared, came out, fell out (of teeth)	<i>àn-ḡùh-ùl</i>	it (SG) appeared, came out, fell out (of teeth)
<i>tḡrr/ tḡr-í</i>	untie, solve	<i>àn-tḡr-èk</i>	it (PL) untied, resolved	<i>àn-tḡr-èl</i>	it (SG) untied, resolved

<i>tùùn/ tìn-i</i>	plant it	<i>àn-tùùn-ùk</i>	it (PL) have sprouted, germinated	<i>àn-tìn-ùl</i>	it (SG) has sprouted, germinated
Transitive bases formed with the suffix -Vk bearing its transitivity marking function					
<i>kòt-òk</i>	shake it, rock it	<i>céŋ-kòt-òk;</i> <i>àŋ-kòt-òk</i>	it (SG) swings, quivers; it (PL) swung, quivered	<i>àŋ-kòt-òl</i>	it (SG) swung
<i>tòl-òk/ tòl-òk</i>	finish it	<i>cén-tòl-òk</i> <i>àn-tòl-òk</i>	it (SG/PL) come(s) to an end; it (PL) ended	<i>àn-tòl-òl</i>	it (SG) ended
<i>tódòt-òk</i>	startle, surprise someone	<i>àn-tódòt-òk</i>	3P (PL) got surprised, startled	<i>àn-tódòt-òl</i>	3P (SG) got surprised, startled
Idiomatic meaning of the derived verbs					
<i>lòh</i>	mix it	<i>yáàh à-lòh- òk=à=íáŋ</i> (idiom.)	3P (PL) are dizzy (lit. the heads are mixed up)	<i>káàh à-lòh- òl=à=íáŋ</i>	3P (SG) is dizzy (lit. the head is mixed up)

Four anticausative verbs do not have a related transitive counterpart, i.e. only the intransitive forms with the suffix *-Vk* and *-Vl* express atelic and telic anticausative predicates with the corresponding verb meanings. These verbs are shown in the table below.

Table 60. Anticausative verbs without a transitive counterpart

Atelic ACAUS derivation (TAM3-root-ACAUS.ATEL)	English translation	Telic ACAUS derivation (TAM3-root-ACAUS.TEL)	English translation
<i>cé-hiir-ìk</i>	it (SG/PL) shrink(s)	<i>à-hiir-ìl</i>	it (SG) shrank
<i>céŋ-kùlùm-ùk</i> <i>àŋ-kùlùm-ùk</i>	it (SG/PL) darken(s) it (PL) darkened	<i>àŋ-kùlùm-ùl</i>	it (SG) darkened
<i>cé-tòòm-òk</i>	it (SG/PL) is /are getting atrophied	<i>àn-tòòm-òl</i>	it (SG/PL) got atrophied
<i>kwààròk cén-cìrm-ìk</i>	The sky is getting dark	<i>kwààròk àn-cìrm-ìl</i>	The sky became dark

It might be objected that the verbs in Table 60 do not represent anticausative derivations due to the fact that there are no corresponding transitive verbs expressing the causation (although see Haspelmath (1987: 14) for the tendency of anticausatives to be lexicalized or reveal idiosyncratic features). Indeed, the verbs in Table 60 might be analyzed as a manifestation of the middle function (one-participant middle). Due to the lack of historical data, it is not possible to say whether related unmarked transitive verb forms existed in earlier usage. This subgroup of verbs is included in the anticausative domain only because of the apparently anticausative-

affine semantics of the English translations (i.e. when something shrinks, then it is imaginable that a corresponding event can be expressed in which someone makes an object shrink). I am aware of the possible drawbacks of this rather intuitive analysis. On the other hand, it is not surprising to find such unclear border cases since the two functions – the one-participant middle (see 3.3.5 below) and the anticausative – occupy neighboring semantic space due to their conceptual similarity. That is, both types of construction predicate a (change of) state of one core participant in the subject position. Thus, it is only to be expected that sometimes it is not easy to draw a clear categorial contrast, especially when one and the same morpheme serves both functions.

We begin our analysis of the attested anticausative verbs by exploring semantic aspects of the base verbs in Table 59. Here, in contrast with the resultative alternation described in section 3.3.3, the transitive counterparts are exclusively causative change-of-state verbs. That is, the transitive bases are lexical causatives having as their subject an agentive participant capable of bringing about a change of state in another participant. Recall that in the case of resultatives, only a handful of base verbs belonged to the class of lexical causatives (e.g. ‘bend’, ‘sharpen’, etc.). Crucially, the anticausative derivation does not impose any restrictions on the subject of the transitive base aside from it being a potential Causer, i.e. a participant capable of effecting a change in another participant. This specification allows, for example, natural forces to perform the Causer role, e.g.:

- (291) *ídi* *àm-pìláy-í* *tàmpàη*
 water PERF3-expand-HT pond
 ‘The water has expanded the pond.’
 (STH20200203 5)

The following example shows the corresponding anticausative derivation:

- (292) *tàmpàη* *àm-pìláy-ìk*
 pond PERF3-expand-ACAUS.ATEL
 ‘The pond expanded.’
 (STH20200203 5)

By contrast, a resultative derivation has as base a transitive verb entailing a prototypical agent specified as [+INST, +VOL, -AFF], acting volitionally to effect changes in another participant.

Natural forces are excluded from the potential subjects of the base verbs participating in the resultative derivation.

The main conceptual difference between the anticausative and the resultative is as follows. The derived intransitive verbs in the anticausative group allow the construal of the described event as coming about on its own without an agent or outside force. So, for example, butter can melt (*tílly* ‘melt’) due to a warm temperature, a cloth can tear (*blárlárl/blárl* ‘tear’) because it is worn out to such a high degree, and things can break due to natural physical laws (*tónr* ‘break’), etc. Dom et al. (2018: 169) give the following description of the anticausative derivation in Bantu by means of a cognate morpheme *-Ik* that fits quite well with the situation in Tima: “The anticausative construction [...] posits a specific selectional restriction on the type of verb it accepts, namely only change-of-state verbs of which the state-change can occur by itself and does not have to be brought about by a prototypical agent.”

By limiting the potential verb bases to lexical causatives, the anticausative derivation in Tima imposes much stricter restrictions on the possible verb bases compared to the resultative derivation, which employs the same derivational morpheme *-Vk*. It follows logically that the number of attested anticausative verbs is lower than that of the resultative verbs (there are 32 anticausative verbs, including four verbs without a transitive counterpart and one idiomatic construction, compared to the probably not exhaustive list of almost 70 resultative verbs).

The semantic peculiarities pertaining to the anticausative derivation alluded to above find their reflection on the syntactic level. So, we consider the anticausative derivation as being semantically specified in terms of the likelihood of the denoted state change occurring spontaneously, i.e. without an agentive intervention. This means that the described change of state is conceptualized as ‘unspecific’ (Haspelmath 1987: 14), i.e. as not implying a specific instrument or a particular manner of carrying out the action leading to the change of state. The implication of a specific instrument or manner of performing the action is strongly associated with a prototypical agent that is lexicalized in the verb. As noted above, the anticausative derivation selects a verb without agent-oriented semantics, allowing the expression of a change-of-state event as being internally caused. The linguistic consequence of this semantic underspecification is that anticausative predicates, in contrast with resultative predicates, are not compatible with instrumental, purposive, and beneficiary NPs. For example, the extension of the anticausative predicate with an instrumental NP in the next example sentence is judged unacceptable by the Tima speakers:

- (293) *cìtì* *àm-bàràrà-ìk=à=táj* * (*m=pòkàà*)
 cloth PERF3-tear:PLUR-ACAUS.ATEL INS=knife
 =SOURCE=LOC3P
 ‘The cloth tore in several places *(with/through the knife).’
 (STH20200201 2)

Example (293) demonstrates that due to the absence of the agent-oriented semantic component in the derived anticausative predicate, the addition of participants implying the presence of an agent manipulating the instrument is prohibited. Likewise, the addition of an oblique argument expressing the manner of performing the action associated with an external force is prohibited with anticausative verbs:

- (294) *γλwùh* *à-mìrn-ìk* * (*η=kùrdí*)
 PL.stone PERF3-divide-ACAUS.ATEL (INS=force)
 ‘The stones split *(with force).’
 (STA20200212 2)

That is, the description of manner by means of the instrumental NP in (294) would have its scope over the whole predicate and would thus contradict the implication of a spontaneous, i.e. internally caused, change of state. It is, however, possible to add oblique arguments that have their scope just over the anticausative subject, describing its properties, as illustrated by the next example:

- (295) *γλwùh* *à-mìrn-ìk=à=táj* *η=ihík*
 PL.stone PERF3-divide-ACAUS.ATEL INS=two
 =SOURCE=LOC3P
 ‘The stones split into two (parts).’
 (STA20200212 2)

In (295), the instrumental NP does not presuppose any external intervention leading to the resultant changed state of the anticausative subject but describes exclusively the properties of this subject not dependent on an external causer. Consequently, there is no conflict between the conceptual structure of the anticausative construction as (potentially) occurring autonomously and the semantic input associated with such an extension.

unaccusativity phenomenon (e.g. Levin and Rappaport Hovav 1995; Haspelmath 2016). The authors (ibid.) use the label ‘unaccusative verbs’ in a purely semantic sense, although it was originally meant as a syntactic term (Perlmutter 1978). Yet, the semantic correlation (i.e. the undergoer subject) associated with the unaccusative pattern has been so strong in language after language that the term ‘unaccusative verbs’ came to be broadly used in the semantic sense. In Tima, thus, we find further confirmation of a strong correlation between the semantic properties of anticausative clauses (roughly corresponding to the semantic phenomena understood as part of the unaccusativity phenomenon in its semantic manifestation – as the intransitive subject being an underlying object) and the link to particular morphosyntactic behavior – the prohibition of an agent-oriented clausal extension. Furthermore, the distinct marking of the atelic vs. telic opposition described immediately below constitutes a structural difference separating the anticausative derivation and the superficially similar resultative derivation. I would not go so far as to suggest that the unaccusativity mechanism underlies the anticausative derivation in Tima, but the conceptual affinity seems to be worth mentioning and might be interesting from a theoretical point of view.

3.3.4.3 Structural properties of the anticausative derivation

Structurally, the anticausative is distinguished from the resultative derivation, most saliently, in terms of its paradigmatic distribution in that with the anticausative derivation, only atelic anticausative constructions are marked with the suffix *-Vk*. Here, the usage of the term ‘atelic’ is rather broad, pertaining to the whole clause, and includes all situation types that constitute the opposite of a single bounded event (i.e. a single participant and/or a single completed event; see 1.3.4.4). Telic anticausatives, on the contrary, employ the suffix *-Vl*.¹³⁵ That is, in its anticausative function, the suffix *-Vk* carries an aspectual value as well, aside from its valency-related meaning. Consider the following example pair for an illustration:

- (297) *íləm* *cèn-cím-ək* *ηάη*
 rubbish IPFV3-gather-ACAUS.ATEL here
 ‘The rubbish gathers here.’
 (STH20200209 3)

¹³⁵ A brief outline in section 3.3.6 below is included in the present analysis to give some details on the verbal suffix *-Vl*.

(298) *íləm* *àn-cím-əl* *ηάη*
 rubbish PERF3-gather-ACAUS.TEL here
 ‘The rubbish gathered here.’
 (STH202002090 3)

(299) *κλήνέν* *céń-cím* *íləm*
 woman IPFV3-gather rubbish
 ‘The woman collects rubbish.’
 (STH202002090 3)

In (297), the proposition is construed as an atelic, i.e. unbounded ongoing event, marked by the imperfective prefix *céń-*. The corresponding telic construction in (298), on the other hand, is linguistically encoded by means of the suffix *-VI* in combination with the perfective prefix *an-*.¹³⁶ The sentence in (299) is presented here to show the underlying causative predicate from which the marked anticausative constructions in (297) and (298) are derived.

The next structural peculiarity of the anticausative derivation in Tima connected to its agentless semantic profile pertains to a broader range of TAM marking – compared to formally similar resultatives – compatible with the anticausatively derived verbs. For anticausative verbs, there seem to be fewer restrictions in this regard. So it is possible to express an anticausative event with reference not only to the past (the most typical case with resultative events) but also to the present and future. Likewise, the potential (i.e. irrealis) mode is more easily applicable to anticausative verbs, while with resultative verbs, the potential constructions are available only for individual verbs in specific pragmatic contexts (see 3.3.3.3 above). Apparently, internally caused transformations encoded as anticausative constructions are easily construed as potentially occurring or happening in the present, i.e. when the ultimate resultant state is not achieved yet. With the agent-oriented resultatives, however, it is less easy to construe an event as potentially occurring without the agent being expressed. The next examples illustrate present, future, and potential anticausative constructions, respectively:

¹³⁶ Note, however, that depending on the verb, the perfective morphology can likewise be used in the construal of atelic (unbounded) predicates. All the possible interpretations in terms of aspectual values will be demonstrated below.

(300) ... *yéèh* *cè-rámíŋ-ìk*
 sorghum IPFV3-roll-ACAUS.ATEL
 ‘(When) the sorghum takes the shape of a funnel (rolls up)...’
 (021007 2 KandaBelo AgriculturalYear)

(301) *káá-dálàà-w-áá=áŋ* *c̀̀kídálk* *c̀̀è-d̀̀n-t̀̀n-òk*
 NEG2SG-play-EP-INS=NEG chair IPFV-FUT3-break-ACAUS.ATEL
 ‘Don’t play with the chair, it will/can break.’
 (STA20200206)

(302) *k̀̀wùh* *k̀̀s-m̀̀rn-ìk*
 SG.stone POT3-divide-ACAUS.ATEL
 ‘The stone can split/is splittable.’
 (STA20200212 2)

Since the non-past tense (including the present and future tense), as well as the potential mood, are strongly associated with atelicity, in these cases, the atelic anticausative suffix *-Vk* is employed for anticausative marking. However, under negation, telic anticausative marking is employed even if there is no explicit reference to the past, as is the case depicted in (303):

(303) *k̀̀kwán* *k̀̀i=k̀̀idímé-èl* *mbéh=àŋ*
 SG.door NEG=close-ACAUS.TEL well=NEG
 ‘The door does not close tightly.’
 (STH20200201 2)

The affirmative clause with potential reading corresponding to the negated sentence in (303) receives the atelic anticausative marking *-Vk*:

(304) *k̀̀kwán* *k̀̀i-k̀̀idímé-èk* *mbéh*
 SG.door POT3-close-ACAUS.ATEL well
 ‘The door can close tightly.’
 (STH20200201 2)

I would like to stress the preliminary nature of this latter generalization concerning anticausative marking under negation, as I could not prove it with all anticausative verbs. There

may be some important factors, including pragmatic aspects and imagined contexts, that have remained unaccounted for.

Overall, the question of the parameters determining the atelic (suffix *-Vk*) and telic (suffix *-VI*) anticausative marking is very complex, and it is impossible to postulate one single rule accounting for all cases. That is, depending on the lexical properties of the verbs, different criteria can yield either telic or atelic readings. Two major criteria are the number of the subject NP and the TAM configuration. In any case, telic anticausative marking can only occur with perfective morphological marking; the imperfective marking (the prefix *cÉN-* in the 3rd person) and the telic suffix *-VI* are mutually excluded. Also, most frequently and predictably, the combination of a singular subject with the perfective aspect in the predicate expressing a completed action receives the telic anticausative marking, e.g.:

- (305) *kihì à-rí-ìl*
SG.place PERF3-change-ACAUS.TEL
'The place changed.'
(STA20200211 1)

The corresponding predicate with a plural subject receives the suffix *-Vk*:

- (306) *ihì à-rí-ìk*
PL.place PERF3-change-ACAUS.ATEL
'The places changed.'
(STA20200211 1)

The verb *rí* 'change' in its anticausative form is not compatible with imperfective/atelic readings (i.e. in Tima, it is not possible to express the idea 'the place is constantly changing', for example, with the verb *rí* 'change'). For such verbs, there are no forms with imperfective marking, and thus, the possibilities of alternation in terms of tense configuration, i.e. past/no-past (aside from subject number) are exhausted by the two patterns exemplified in (305) and (306). That is, anticausatives with plural subjects receive the atelic *-Vk* suffix, and with a singular subject, the suffix *-VI*. Other verbs exhibiting such behavior are:

amenayık/amenayıl 'it (PL) reduced' / 'it (SG) reduced' (from *mēna* 'take off from sthg.')

ampuçuuk/ ampuçuul 'it (PL) warmed up' / 'it (SG) warmed up'

àntózhèk / àntózhèl ‘it (PL) exploded’ / ‘it (SG) exploded’

àmpìrîik / àmpìrîil ‘it (PL) sparkled, flashed’ / ‘it (SG) sparkled, flashed’

àntáanèk / àntónèl ‘it (PL) broke’ / ‘it (SG) broke (of pots etc.)’

àntóniik / àntóniil ‘it (PL) broke’ / ‘it (SG) broke (of sticks etc.)’¹³⁷

àntélànèk / àntélànèl ‘it (PL) melted’ / ‘it (SG) melted’

àntùrùuk / àntùrùul ‘it (PL) burst’ / ‘it (SG) burst’

àntóòrik / àntóòril ‘it (PL) crumbled’ / ‘it (SG) crumbled’

àntùunèk / àntùunèl ‘it (PL) sprouted, germinated’ / ‘it (SG) sprouted, germinated’

àntèrèk / àntèrèl ‘it (PL) untied’ / ‘it (SG) untied’

àntòdòtùk / àntòdòtùl ‘they startled’ / ‘(s)he startled’.

Generalizing over the whole group of verbs presented in the list above, we can say that the punctual nature of the events described by anticausative verb forms probably accounts for this alternation pattern. The punctuality is especially prominent with the verbs ‘burst’, ‘explode’, ‘untie’, and ‘flash’. For the other verbs, where the punctual nature might not seem as obvious, such as e.g. *àmpùrùuk* ‘it (PL) warmed up’ or *àntélànèk* ‘it (PL) melted’ etc. (i.e. notions that are associated with gradable change), we can tentatively assume that with them, some final state of the corresponding processes is lexicalized in an anticausative construction (e.g. warmed up to the degree usually acceptable/necessary for a particular item). And again, a change of state verb may be punctual in one language and non-punctual in another. As LaPolla and Van Valin (1997: 106) remark in this regard, “Here again it is clear that determining the Aktionsart of a verb is not a matter of looking at the state of affairs it depicts; rather, it is a linguistic property which can be determined only by means of linguistic tests.”

¹³⁷ For the verb *tón-* ‘break’, a pluractional form exists – the reduplicated root *tóntón*. It is possible to form an anticausative with this reduplicated root and with a singular subject. It yields an iterative reading ‘it (SG) broke in many places’. With reduplicated roots only the atelic anticausative suffix *-Vk* can be used:

còràŋ àn-tóntón-èk

SG.stick PERF3-break:PLUR-ACAUS.ATEL

‘The stick broke (in many places).’

(STH20200211 3)

Another pattern of alternation between atelic and telic anticausative marking is exemplified by the following sentences:

(307) *kápé àn-tóbór-əl*
 SG.paper PERF3-unroll-ACAUS.TEL
 ‘A sheet of paper unrolled.’
 (STH20190119CM2)

(308) *kápé/yápé cèn-tóbór-ək*
 SG.paper/PL.paper IPFV3-unroll-ACAUS.ATEL
 ‘A sheet of paper/ sheets of paper is/are unrolling (unroll(s) repeatedly).’
 (STH20190119CM2)

(309) *yápé àn-tóbór-ək*
 PL.paper PERF3-unroll-ACAUS.ATEL
 ‘Sheets of paper unrolled.’
 (STH20190119CM2)

Here, the telic anticausative marking also occurs with a singular subject and the perfective morphology (ex. (307)). Yet the atelic marking can be used in two cases. In combination with an imperfective prefix, both singular and plural subjects are acceptable; the resultant reading is that of an ongoing (non-past) or iterative/repetitive, unbounded event (ex. (308)). Likewise, atelic anticausative marking has to be used in combination with the perfective prefix when the subject is in the plural (ex. (309)). The following verbs behave in a similar manner:

cémbàràràyìk/ àmbàràràyìk/ àmbàràyìl ‘it (SG/PL) tears (in several places)’ / ‘it (PL) tore (in several places)’ / ‘it (SG) ‘tore’

céndùmùyìk/ àndùmùyìk/ àndùmùyìl ‘it (SG/PL) reduces’ / ‘it (PL) reduced’ / ‘it (SG) reduced’

céṅkìdíméèk/ àṅkìdíméèk/ àṅkìdíméèl ‘it (SG/PL) closes (repeatedly)’ / ‘it (PL) closed’ / ‘it (SG) closed’

cémèrnìk/ àmèrnìk/ àmèrnìl ‘it (SG/PL) divides, splits into many pieces’ / ‘it (PL) divided, split’ / ‘it (SG) divided, split’

cémpíllηík/ àmpíllηìk/ àmpíllηìl ‘it (SG/PL) expands’ / ‘it (PL) expanded’ / ‘it (SG) expanded’

cénṭùγáṭùk/ ànṭùγáṭùk/ ànṭùγáṭùl ‘it (SG/PL) opens (repeatedly)’ / ‘it (PL) opened’ / ‘it (SG) opened’

cérλmírìk/ àrλmírìk/ àrλmírìl ‘it (SG/PL) rolls up’ / ‘it (PL) rolled up’ / ‘it (SG) rolled up’

cénṭùhùk/ ànṭùhùk/ ànṭùhùl ‘it (SG/PL) appears, comes out’ / ‘it (PL) appeared, came out’ / ‘it (SG) appeared, came out’

céηkàṭk/ àηkàṭk/ àηkàṭl ‘it (SG/PL) swings, quivers’ / ‘it (PL) swung, quivered’ / ‘it (PL) swung/ quivered’

céntólòk/ àntólòk/ àntólòl ‘it (SG/PL) (will) come to an end’ / ‘it (PL) ended’ / ‘it (SG) ended’

The verb *cim* ‘gather’ shows a unique behavior under anticausativization due to the intrinsic plurality encoded in the lexical root: the atelic coding with *-Vk* is employed with non-past constructions accompanied by non-past (i.e. imperfective) morphology, and *-Vl* with past constructions:¹³⁸

- | | | |
|--|-----|--|
| <p>(310) <i>ihwáá cèn-cím-òk</i>
 people IPFV3-gather-ACAUS.ATEL
 ‘The people are gathering.’
 (STH20200201 2)</p> | vs. | <p><i>ihwáá àn-cím-òl</i>
 people PERF3-gather-ACAUS.TEL
 ‘The people gathered.’</p> |
|--|-----|--|

Table 59 above gives all the possible forms and corresponding readings of the attested anticausative verbs. The question of the pragmatic implications that might override the regularities named in this analysis, for example, when speakers conceptualize an event as a single telic whole despite the plural participants, deserves further investigation.

To conclude this overview of the conditions on atelic/telic anticausative marking, I would like to remark that, according to the Tima speakers who provided the data analyzed here, it is in some cases possible to replace the suffix *-Vl* in telic constructions with the suffix *-Vk*, when the latter is complemented with the cliticon *=a=ṭaη* (=SOURCE=LOC3P, here with a completive

¹³⁸ Yet, when separate groups of people have gathered at different places, again the atelic marking would be correct.

causativized through the morpheme *-Vk* (see 3.2.2 for the causative function of the suffix *-Vk*). The verb *cλdù* ‘ripen’ allows only intransitive predicates; to express a causative meaning, the periphrastic causative construction has to be used (described in 3.2.2.6).

3.3.5 The one-participant middle function

3.3.5.1 General overview

In this section, the derivations employing the suffix *-Vk* in its detransitivizing function are described; as a group, these can be subsumed under the term ‘one-participant middle verbs’. Since a detailed description of one-participant middles from the terminological point of view was given in section 2.2.2, where the middle verbs marked with another detransitivizing suffix *-ak / -ak* were dealt with, I will limit myself here to a general definition of the middle as a semantic category describing an eventuality type where there is very low distinguishability of participants (Kemmer 1993): that is, the event expressed pertains to the sphere of the main participant (the intransitive subject) without any transfer of energy to another distinct participant.

The one-participant middles analyzed here share with the anticausative derivation the distinct marking of atelic and telic constructions. Here, likewise, the suffix *-Vk* marks atelic, and *-Vl* telic predicates (only three verbs have identical marking, with the suffix *-Vk* in both telic and atelic constructions; see Table 63 below). In the present analysis, I use the gloss MID.ATEL for atelic middles and MID.TEL for telic middles, in analogy with the anticausative glossing.

Also, like the anticausative derivation, an important number of derived intransitive verbs have as their bases causative transitive verbs, as illustrated in the next example pair, where the sentence in (313) demonstrates the causative predicate and (314) shows the corresponding intransitive derived construction:

- (313) *kλhúnén cè-γówár cλkìdλk*
 woman IPFV3-move.aside SG.chair
 ‘The woman is moving the chair aside.’
 (STH20200209 3)

- (314) *klhúnén cè-rówár-èk à=ḥ̀ndò*
 woman IPFV3-move.aside-MID.ATEL SOURCE=way
 ‘The woman goes off the road.’
 (STH20200209 3)

As can be seen from examples (313) and (314), the same morphosyntactic operation is involved as in the cases of anticausative and resultative derivations: the underlying subject gets eliminated, and the underlying object moves into the subject position. The derivational operation yields an intransitive predicate.

Semantically, the verbs described here are overwhelmingly represented by the coherent class of (body) motion/spatial configuration verbs, as well as verbs designating bodily processes and related usages, mostly person-describing properties. This semantic specification of the derived verbs sets them apart from anticausative and resultative verbs. The most salient difference is that the derived subject in middle constructions is predominantly an animate participant performing particular body motion actions (see below), whereas in the other two types of construction, it is overwhelmingly inanimate. Furthermore, more than half of the verbs in this group are lexicalized or do not have a transitive counterpart, again contrasting with the resultative and anticausative alternations. By invoking the iconicity principle (Haiman 2008), we can link the tendency to lexicalizations to the conceptual inseparability of participant roles in body motions/postures, bodily processes, and related situation types, characteristic of one-participant middles.

3.3.5.2 (Body) motion middles, bodily processes, and related uses

In section 2.2.2.4, body motion middle verbs marked with the (agent-oriented) detransitivizing suffix *-ak / -ak* were presented. It was mentioned there that body motion middles marked with *-ak / -ak* are low in number within the Tima verb lexicon and that the main strategy of marking this semantic verb class is by means of the derivational suffix *-Vk*. As with the anticausative function, performed by the morpheme *-Vk*, the verbs of the (body) motion/spatial configuration group show the same marking opposition in that it is the atelic construction that is derived with

-*Vk*; the telic counterpart receives a distinct marking with the suffix -*VI*. This mechanism is illustrated by the following examples:

(315) *ihìnà à-hùndú-ùk*
 PRON3PL PERF3-jump-MID.ATEL
 ‘They have jumped.’
 (STH20190122 1)

(316) *píná cé-hùndú-ùk*
 PRON3SG IPFV3-jump-MID.ATEL
 ‘(S)he is jumping.’
 (STH20190122 1)

(317) *píná à-hùndú-ùl*
 PRON3SG PERF3-jump-MID.TEL
 ‘(S)he has jumped (once).’
 (STH20190122 1)

As can be seen from the sentences in (315) and (316), the suffix -*Vk* is employed in pluractional (i.e. atelic) contexts including a plural subject (ex. (315)) and in iterative/repetitive/durative situation types (ex. (316)). Explicitly telic contexts (i.e. a single participant carrying out a single action) require a distinct marking – the derivational suffix -*VI*, as shown in (317) (see 3.3.6 below for details concerning the suffix -*VI* in Tima). Only three verbs designating (body) motion/spatial configuration have the suffix -*Vk* in both telic and atelic constructions (see Table 63 further below). Some verbs denoting body motion are lexicalized, i.e. the suffix -*Vk* is a petrified unanalyzable element of the lexeme (see Table 64).

Table 61 presents the attested body motion middle verbs marked with -*Vk* in complementary distribution with -*VI*-marked verbs. All the available readings in terms of TAM are given in the relevant columns for each verb.

Table 61. One-participant middles: Body motion/spatial configuration verbs

Verb base (root-(EP)-(HT))	English gloss	Atelic derivation (TAM3-root- MID.ATEL)	English translation	Telic derivation (TAM3-root- MID.TEL)	English translation
Body motion/posture verbs					
Verbs with transitive counterparts					

<i>póř/ pór-í</i> (atel./tel.)	lean it down, lay down	<i>àm-póř-òk</i>	3P (PL) leaned down	<i>àm-póř-òl</i>	3P (SG) leaned down
<i>kùdàḷḷḷ/</i> <i>kùdàḷḷ-í</i> (atel./tel.)	roll it	<i>àḡ-kùdàḷḷḷ-ìk</i> <i>céḡ-kùdàḷḷḷ-ìk</i>	3P (SG/PL) has/ have rolled; 3P is/are rolling	<i>àḡ-kùdàḷḷ-ìl</i>	3P (SG) has rolled/flipped over
<i>rìih/ rihí</i> (atel./tel.)	turn it	<i>cé-rìih-ìk</i>	3P (SG/PL) turn(s)	<i>à-rihí-ìl</i>	3P (SG/PL) turned ¹³⁹
<i>tòn(tón) tòn-í</i> (atel./tel.)	return it	<i>cén-tòn-òk</i>	3P (SG/PL) (will) return(s)	<i>àn-tòn-èl</i>	3P (SG/PL) has/ have returned
<i>hódá-</i> <i>àk¹⁴⁰/hódá-y-í</i> (atel./tel.)	leap (over it), step over it	<i>cé-hódá-ák;</i> <i>à-hódá-àk</i>	3P (SG/PL) leap; 3P (PL) leaped/ 3P (SG/PL) leaped repeatedly	<i>à-hódá-àl</i>	3P (SG) has leaped once
<i>dò-w-í</i>	put it	<i>cén-dò-w-òk</i>	3P stand(s) up	<i>àn-dò-w-èl /</i> <i>àn-dò-òl¹⁴¹</i>	3P stood up, stopped
<i>řòwàár</i>	move it aside	<i>cé-řòwàár-òk;</i> <i>à-řòwàár-òk</i>	3P (SG/PL) move(s) aside; 3P (PL) have moved aside	<i>à-řòwàár-òl</i>	3P (SG) has moved aside
Verbs without a transitive counterpart					
<i>dúp-</i>	descend	<i>cén-dúp-ùk;</i> <i>àn-dúp-ùk</i>	3P (SG/PL) descend; 3P (PL) descended	<i>àn-dúp-ùl</i>	3P descended

¹³⁹ The verbs *rìih/rihi* ‘turn’ and *tòn(tón)- /tòn-* ‘return’ are rather exceptional in that the past form is always marked with *-Vl* independent of the number of participants. With other verbs, it is usually only with singular subjects that the verb is marked with *-Vl* in the past. I want to stress, though, that further investigation is necessary in order to establish more precise factors influencing the opposition between *-Vk* and *-Vl*-marked middle verbs. It may be that pragmatic considerations may override the generalizations stated in the present analysis, which is mainly based on elicited sentences. That is, depending on whether or not the speaker perceives an event as a single bound whole, she may construe the corresponding linguistic expression as such by means of the suffix *-Vl*, even with plural participants.

¹⁴⁰ Recall that the suffix *-ak / -ak* can be used as a marker of atelicity with some verbs (see 2.4.5). This is also the case with the verb *hódá-* ‘leap, step over’. The result is that the same verb form, *-hódá-àk*, is used in both transitive and intransitive constructions. In the former case, the suffix *-ak* indicates the pluractionality (i.e. atelicity) and in the latter, the middle meaning. It can be assumed in this latter case that the suffix form *-ak* emerged as the realization of *-Vk* resulting from the assimilation of the vowel to the preceding root vowel.

¹⁴¹ The two forms *àn-dò-w-èl / àn-dò-òl* ‘3P stood up, stopped’ represent two possible variations without any discernible meaning difference.

<i>húndù-</i>	jump	<i>cé-húndù-ùk;</i> <i>à-húndù-ùk</i>	3P (SG/PL) jump; 3P (PL) jumped/ 3P (SG/PL) jumped repeatedly	<i>à-húndù-ùl</i>	3P (SG) jumped once
<i>tápa-</i>	crawl, move from one item to another (like stone, tree, etc.)	<i>cén-tápá-àk;</i> <i>àn-tápá-ak</i>	3P (SG/PL) is/are crawling; 3P (PL) have crawled	<i>àn-tápá-àl</i>	3P (SG) crawled
<i>cìréη-</i>	surround	<i>cén-cìréη-àk</i>	3P assume(s) a surrounding position	<i>àη-cìréη-àl</i>	3P assumed a surrounding position
<i>ḡl-</i>	come together	<i>cén-ḡl-àk</i>	3P (PL) agree (lit. come together)	<i>àn-ḡl-àl</i>	3P (PL) agreed (lit. came together)

The verbs in the table above are subdivided into two groups according to the properties of their bases. The first group includes verbs that have transitive counterparts as their bases, in analogy with the anticausative derivation described above in 3.3.4. There, the suffix *-Vk* serves a detransitivizing function: in the derived predicate, the sole core participant occupies the syntactic subject position, and the original subject is eliminated from the surface syntactic representation. The sentences below demonstrate the derivation from a transitive predicate (ex. (318)) to yield an intransitive proposition (ex. (319)):

- (318) *wéén cém-pḡr cíbál ḡ=hàηkḡréη*
mother IPFV3-lay.down child DIR=bed
‘The mother is laying the child on the bed.’
(STH20200211 5)

- (319) *pínál àm-pḡr-àk ḡ=hàηkḡréη*
PRON3SG PERF3-lay.down-MID.ATEL DIR=bed
‘(S)he lay down on the bed.’
(STH20200211 5)

Notably, the transitive bases of the derived one-participant middles designating body motion represent lexical causative verbs, and the corresponding predicates express externally-caused changes of state in another participant (with body motion/posture verbs, the second participant

in the transitive predicate exhibits theme-like properties as, generally, this a participant is being moved or brought into a new position). So, in (318), the verb *cém-póɽ* ‘3P lays (it)’ denotes a causative transitive event whereby the agent (mother) brings about a change of state – a new position – in the patient (child). In the derived intransitive sentence (ex. (319)), the main participant in the subject position performs the corresponding action on his/her own. Recall from the discussion in section 3.2.2.4.2 on causative derivation that for a subgroup of verbs, the reverse direction of derivation takes place – from unmarked intransitive body motion/posture verbs to derived transitive causative verbs. Both detransitivizing and transitivity (i.e. causativization) mechanisms are equally distributed across the verbal lexicon in terms of the number of attested cases.

One verb in Table 61 defies the generalization made for the rest of the group. The verb *hśdá-* ‘leap, step over’ exhibits an idiosyncratic pattern: the transitive counterpart has as its object participant not a Patient but rather a Ground participant– an object leapt over, with the derived subject corresponding to the underlying transitive subject. That is, in contrast to the rest of the group, in this particular case the derived construction is agent-preserving, as shown in the following example pair:

- (320) *píná* *à-hśdá-y-í* *kàwùh*
 PRON3SG PERF3-leap-EP-HT SG.stone
 ‘(S)he leapt over a stone (once).’
 (STH 20190119 1 CM)

- (321) *ibárimbáí* *à-hśdá-àk* *kúlà*
 children PERF3-leap-MID.ATEL yesterday
 ‘The children leapt yesterday.’
 (STH 20190119 1 CM)

- (322) *píná* *à-hśdá-àl* *à=kàwùh*
 PRON3SG PERF3-leap-MID.TEL SOURCE=stone
 ‘(S)he leapt (herself) from a stone.’
 (STH 20190119 1 CM)

Other detransitivized body motion/posture verbs in Table 61 introduce Ground arguments by means of applicative morphology, as demonstrated below for the verb *cìréŋ* ‘assume a

surrounding position’, where the Ground argument *kwálsɿ* ‘mountain’ is introduced into the argument structure by the verbal instrumental applicative *-aa* (see 1.3.4.3.3 on the functions of the verbal instrumental suffix):

- (323) *kìyámò cèn-cìréŋ-òk-áátán kwálsɿ*
 SG.enemy IPFV3-surround-MID.ATEL-INS:SOURCE=LOC3P SG.mountain
 ‘The enemy surrounds the mountain (lit. assumes a surrounding position around the mountain).’
 (STH20190119 CM 1)

Aside from the exceptional instance demonstrated in (320)-(322), other verbs with transitive counterparts presented in Table 61 follow a regular pattern of derivation, with the underlying agent deleted and the patient/theme promoted into the derived subject position.

With the body motion verb class, the semantic relationship between the transitive (i.e. causative) and the derived intransitive counterparts is not equal. Whereas the referent of the direct object in the transitive counterpart lacks agentivity, the referent of the derived subject exhibits agentive properties in that it is this participant who instigates and voluntarily performs an action designated by the verb. Consider the following example pair for an illustration:

- (324) *ìdí yábòh àŋ-cáàk=à=tán ilil hòr*
 water PL.meat PERF3-become=SOURCE=LOC3P PL.cold soon
dámák í-tón-é=tán í=cìŋí
 then 1P.PL-return-HT=LOC3P DIR=fire
 ‘The soup soon got cold, and then we returned it to the fire.’
 (STH20190129 1)

- (325) *ma=dɔɔ-w-aa ʝ=ib ʌ ɪ-dah-ɪ-y=ɪ ɪ=wɛɛn*
 and=stand.up-EP-INS ERG=PL:child P-say-HT- DIR=mother
 EP=APPL
cɛ=yɛ tɔn-ɔk
 IPFV3=REP return-MID.ATEL
 ‘And then the children said to the mother that they will return.’
 (031007_Daldum_Clan-dividing_014)

In (324), the referent of the direct object of the transitive predicate with the verb *tòn* ‘return’ is a typical patient/theme participant that can be characterized by the feature specification [-INST, -VOL, +AFF]: this participant undergoes a change of state (+AFF) through the intervention of an external agent. That is, the sentence in (324) presents an externally caused change of state. The referent of the subject of the derived middle construction in (325), in contrast, exhibits agentive semantics in that it acts volitionally through his body. At the same time, it undergoes a change of state (location or position). Thus, the subject of the derived middle predicate in (325) can be characterized by such feature specifications as [+INST, +VOL, +AFF], corresponding to the notion of an affected agent (defined in section 2.2.2). That is, here, we are dealing with verbs of change of state initiated by the subject participant itself. For this reason, some authors consider the body motion/posture verbs as verbs describing internally-caused eventualities (e.g. Levin and Rappaport Hovav 1995): the participant in the subject position in the middle derivation brings about a change of state (location or position) through his/her internal energy. In other words, the instigation of the changed state is construed as internally generated. Recall that the derived anticausatives using the same morphological marking in Tima (i.e. the suffix *-Vk* for atelic and *-Vl* for telic constructions) have also been characterized as internally caused compared to the corresponding causative predicates, which are conceptualized as externally caused events (see 3.3.4 above).

The verbs *dúp-* ‘descend’, *tápà-* ‘crawl’, *hùndù-* ‘jump’, and *cìréŋ-* ‘surround’, and *tól-* ‘come together’ in Table 61 differ from the verbs just described in that they do not have transitive counterparts and they have precategorial roots as their bases, which cannot be used on their own and must be derived to enter a syntactic construction. Accordingly, there is no detransitivizing effect imposed by the suffix *-Vk* (*-Vl* in telic constructions) in this case; the suffix just signals the middle semantics of the construction. The next examples serve as an illustration:

- (326) *kàcìmbárí cé-hùndú-ùk*
 child IPFV3-jump-MID.ATEL
 ‘The child is jumping.’
 (STH20190122 1)

- (327) *ìbárímbárí à-hùndú-ùk*
 children PERF3-jump-MID.ATEL
 ‘The children jumped yesterday.’
 (STH20190122 1)

- (328) *kìcimbárí à-hùndù-ùl*
 child PERF3-jump-MID.TEL
 ‘The child jumped (once).’
 (STH20190122 1)

Notably, the verbs *dúp-* ‘descend’, *tápà-* ‘crawl’, *hùndù-* ‘jump’, and *cìréḡ-* ‘surround’ have no other attested forms aside from the intransitive telic vs. atelic middle forms derived for *-Vl* and *-Vk*, respectively. This is in contrast with the precategorial bases discussed in previous sections, where a given root can be used either intransitively with the suffix *-ak / -ak* or transitively with the suffix *-Vk* in its causative function.

The following table shows the middle verbs designating bodily processes and related usages. Here, only precategorial roots serve as bases for the derivation; and again, only the intransitive constructions presented are available in this case.

Table 62. *One-participant middles: Bodily processes and related senses*

Verb base	English gloss	Atelic derivation (TAM3-root-MID.ATEL)	English translation	Telic derivation (TAM3-root-MID.TEL)	English translation
<i>rùy-</i>	die	<i>à-rùy-ùk</i>	they died (still can see the bodies)	<i>à-rùy-ùl</i>	they died
<i>wùdùh-</i>	be unconscious	<i>àḡ-wùdùh-ùk</i>	3P (PL) are unconscious	<i>àḡ-wùdùh-ùl</i>	3P (SG) is unconscious
<i>hàlòm-</i>	be jealous, selfish	<i>à-hàlòm-òk</i>	3P (PL) are jealous, selfish	<i>à-hàlòm-òl</i>	3P (SG) is jealous, selfish

Table 63 presents the verbs belonging to the semantic class of motion/position, marked with *-Vk* in both telic and atelic contexts. Here, in contrast to the verbs presented above in Table 61 and Table 62, no distinct marking is employed to signal atelic vs. telic middle constructions, i.e. both aspectual types are marked with *-Vk*.

Table 63. Motion/position middle verbs marked with *-Vk* in telic and atelic constructions

Verb base	English gloss	Middle derivation	English translation
<i>léwóléwó (î)</i>	wink it (blink eyes)	<i>à-léwóléw-òk;</i> <i>cé-léwóléw-òk</i>	3P (SG/PL) has/ have winked; 3P is/are winking
<i>mòràár/ mòràr-î</i> (atel. /tel.)	spin it, flip it over	<i>à-mòràár-èk;</i> <i>cé-mòràár-èk</i>	3P (SG/PL) has/have spun; 3P is/are turning/spinning
<i>póór</i>	refuse	<i>àm-póóròk</i>	3P (SG/PL) has/have left angrily

The verbs in Table 63 participate in a transitive-intransitive alternation parallel to that described for the verbs in Table 61. That is, the derived verb extended with the suffix *-Vk* is a detransitivized variant of the corresponding transitive base verb; the derived subject corresponds to the underlying direct object. The following examples demonstrate the alternation:

- (329) *kìcimbárí céη-mòràár kwóónó*
 SG.child IPFV3-spin SG.thing
 ‘The boy is spinning this thing.’
 (STH20200201 2)

- (330) *kwóónó céη-mòràár-èk*
 SG.thing IPFV3-spin-MID.ATEL
 ‘The ball is spinning.’
 (STH20200201 2)

- (331) *kwóónó à-mòràár-èk*
 SG.thing PERF3-spin-MID.ATEL
 ‘The ball has spun.’
 (STH20200201 2)

As seen from the comparison between (330) and (331), both construction types, i.e. atelic, or pluractional (ex. (330)), as well as telic, or non-pluractional (ex. (331)), receive identical derivational coding – the suffix *-Vk*. So far, only these three verbs have been attested to exhibit

such a morphosyntactic pattern, contrasting with the body motion middles, which differentiate morphologically between atelic and telic events.

The verbs in Table 63, thus, exhibit a structural resemblance with resultative verbs (dealt with in section 3.3.3), which likewise do not differentiate formally between atelic (pluractional) and telic (non-pluractional) constructions. From the semantic perspective, however, the two types of verbs can be clearly differentiated: whereas resultative verbs express acquired non-dynamic states and represent accomplishments, the motion verbs discussed here designate dynamic processes and represent activities.

3.3.5.3 Lexicalized one-participant middle verbs.

Aside from the productive derivation of verbs with middle semantics by means of the suffix -*Vk*, a number of verbs are lexicalized, i.e., for these verbs, no unmarked counterparts exist in the present-day usage. These verbs are shown in the table below.

Table 64. *Lexicalized middle verbs with the suffix -Vk*

(Body) motion verbs			
Verb base	English gloss	Middle derivation	English translation
<i>kidìk</i> ¹⁴²	fall	<i>àŋ-kídìk</i>	3P (SG) has fallen
<i>kádòhádòhòk</i>	move hips	<i>àŋ-kádòhádòhòk</i>	3P (SG/PL) has/have moved hips
<i>kúmòk</i>	dance (a special dance)	<i>àŋ-kúmòk</i>	3P (SG/PL) has/have danced
<i>dīk</i>	walk	<i>àn-dīk</i>	3P (SG/PL) has/have walked
<i>búrhùk</i>	slide over the ground	<i>àm-búrhùk</i>	3P (SG/PL) has/have slid over the ground
<i>rúúhùk</i>	hang around	<i>cé-rúúhùk</i>	3P (SG/PL) hang(s) around
<i>ɾàwírùk</i>	wind around	<i>à-ɾàwírùk</i>	3P (SG/PL) has/have wound (itself)
Bodily processes and related usages			

¹⁴² The verb ‘to fall’ in Tima is an irregular verb. With plural subjects, the verb has the form *kidiyá* ‘they fell down’.

<i>mùnùnùk</i>	feel numb	<i>cídà à-mùnùnùkdà</i>	my body feels numb
<i>búlúk</i>	die	<i>àm-búlúk</i>	3P has died
<i>pánòòk</i>	breath	<i>cém-pánòòk</i>	3P is breathing
<i>púúk</i>	blow mouth	<i>cém-púúk</i>	3P blows mouth
<i>ròhòk</i>	pick one`s nose	<i>cé-ròhòk</i>	3P is picking his nose
<i>ìyìk</i>	shiver	<i>cén-ìyìk</i>	3P is shivering
<i>ɛ̀l̀l̀k</i>	be in the beginning of pregnancy	<i>cén-ɛ̀l̀l̀k</i>	3P is in the beginning of pregnancy
<i>cécèhèk</i>	get thin	<i>àn-cécèhèk</i>	3P became thin
Sound emission and emotive speech acts			
<i>l̀j̀k</i>	cry for no reason	<i>cé-l̀j̀k</i>	3P cries for no reason
<i>lélmòk</i>	shout	<i>cé-lélmòk</i>	3P is shouting
Other verbs			
<i>dáhòòk</i>	be greedy	<i>cén-dáhòòk</i>	3P is greedy
<i>dódòòk</i>	be homeless	<i>cén-dódòòk</i>	3P is homeless
<i>bóòròk</i>	be beyond marriage	<i>àm-bóòròk</i>	3P is beyond marriage
<i>múlúk</i>	hide	<i>cén-múlúk</i>	3P is hiding
<i>ɣàlik</i>	take shelter from rain	<i>cé-ɣàlik</i>	3P takes shelter from rain

The lexicalized middle verbs listed in Table 64 can be used exclusively in intransitive constructions. It is noteworthy that the number of lexicalized middle verbs with the petrified *-Vk* is higher than the number of verbs that are derived productively by means of the detransitivizing suffix *-Vk*: 22 entries (Table 64) represent lexicalized verbs, while the productive pattern applies to 18 verbs attested so far. As was already mentioned in 2.2.2 with regard to the one-participant middle verbs derived with *-ak / -ak*, it is a cross-linguistic tendency for these semantic classes of verbs to be lexicalized to a considerable extent (Kemmer 1993, 1994). That is, cross-linguistically, such verbs tend not to have a transitive counterpart reflecting the iconic relationship between the form and the corresponding conceptual structure. That is, the verbs denoting such events as body motion/posture, bodily processes, and similar event types represent situations where there is no conceptual separation between initiating and affected participants. Recall also, from the description of one-participant middles marked with the suffix *-ak / -ak*, that the number of lexicalized forms referring to one-participant middle situation types likewise exceeded the productive formation within the same semantic domain (see 2.2.2). Thus,

the data obtained from the Tima verb lexicon confirm the general observation by Kemmer (1993, 1994), who mentions an important number of deponents (i.e. lexicalized verbs) within one-participant middle events across languages.

3.3.5.4 Concluding remarks

In conclusion, it is interesting to compare the one-participant middle verbs marked with *-Vk* to those marked with *-ak / -ak*. On the whole, the middle verbs derived with the suffix *-Vk* include verbs from the semantic field of body motion and bodily processes, whereas the one-participant middles marked with *-ak / -ak* predominantly include verbs of perception, cognition, (emotive) speech acts and sound emission, and ingestive verbs.

The following schematic representation summarizes these findings:

Figure 13. The distribution of one-participant middle verbs marked with -Vk as opposed to -ak / -ak (including lexicalized verbs)

Suffix \ Semantic field	Body motion/posture	Bodily processes and related usages	Perception/cognition	Sound emission and emotive speech acts	Ingestive verbs	Other
<i>-Vk</i>	23	11	0	2	0	4
<i>-ak / -ak</i>	7	2	8	11	9	10 ¹⁴³

The one-participant middle verbs derived with *-Vk* show similarities in some respects to the anticausative verbs employing the suffix *-Vk*, and differ from them in others. As in the case of anticausative derived verbs, and contrasting with the resultative function, middle verbs employ distinct morphological marking in telic/atelic constructions. That is, the suffix *-Vk* is used in complementary distribution with the suffix *-Vl* to mark atelic (pluractional) vs. telic (non-pluractional) contexts, respectively.

A salient difference between the anticausative and the one-participant middle derivation pertains to the degree of productivity. In the case of the one-participant middles, more than half

¹⁴³ Among the 10 entries, there are spontaneous, i.e. internally caused verbs. Internally caused verbs with the suffix *-Vk* are treated in section 3.3.4 within the analysis of the anticausative derivation.

of the attested cases are lexicalized verbs or represent verbs that do not have a corresponding transitive base. Anticausative verbs, in contrast, represent a highly productive derivational pattern where the intransitive (anticausative) verb shows a transparent semantic relationship to the underlying transitive base verb (the five attested exceptions in 3.3.4.2 (Table 60) have been tentatively analyzed as borderline cases between the anticausative and one-participant middles). Finally, the productively derived one-participant middles contrast with both anticausative and resultative derived verbs in that a significant majority of the former have an animate derived subject exhibiting agentive features, while in the latter two the derived subject is inanimate and highly patientive.

3.3.6 The derivational morpheme *-VI* and its distribution through the verbal lexicon

This section is intended to give some details on the distribution of the derivational suffix *-VI* in the Tima verb lexicon. It seems necessary to provide at least some information in this regard since the suffix *-VI* is in complementary distribution with the suffix *-Vk*, the main focus of the present analysis. This complementarity means that there are areas where the *-Vk* lacks functional control which is taken over by another linguistic element. Thus, we need to show how this restricted functional scope is compensated for, in order to give a complete picture of the operational capacity of the suffix *-Vk*. Also in this section, some observations will be provided with regard to the relationship of *-VI* to possible cognate forms in Bantu languages.

The derivational suffix *-VI* is another intransitivizing suffix in Tima, labeled ‘reversive’ or ‘separative’ in earlier analyses of Tima verbal morphology (e.g. Dimmendaal 2010a; Alamin 2012) but reanalyzed as ‘middle’ in later contributions (e.g. Schneider-Blum 2017; Dimmendaal and Schneider-Blum 2018). Based on the distribution of this suffix through the verbal lexicon, it seems that in the current usage, this suffix is devoid of an autonomous function in the verbal domain.¹⁴⁴ The suffix *-VI* occurs in complementary distribution with *-Vk* in the anticausative function and the one-participant middle function, where *-VI* is employed in telic

¹⁴⁴ With nouns, the suffix *-VI* represents a highly productive mechanism for the formation of verbal nouns (see Dimmendaal and Schneider-Blum, in prep. for details). With lexicalized verbs, the nominalizing suffix *-VI* attaches to the petrified *-VI* within the verbal root to derive a noun, e.g. *awol* ‘escape’ > *kawolol* ‘escaping’ (verbal noun); *kwarol* ‘cough’ > *kwarolol* ‘coughing’.

and *-V_k* in atelic constructions. Aside from this complementary usage, the suffix *-V_l* is attested only in lexicalized verb forms where it is an unanalyzable element of the verbal root. A list of the lexicalized verbs is given below in Table 65 and Table 66:

Table 65. *Lexicalized verbs with the suffix -V_l*

Lexicalized verb	English gloss	Semantic domain
<i>cilàwòl</i>	be exhausted	middle: bodily processes
<i>bə̀ràḡsəl</i>	collapse	middle: bodily processes
<i>kwà̀rəsəl</i>	cough	middle: bodily processes
<i>pù̀rù̀wəl</i>	sweat	middle: bodily processes
<i>ɾà̀à̀rəsəl</i>	move aside	middle: body motion
<i>rà̀ḡkəl</i>	crawl (of a baby)	middle: body motion
<i>ɟ̀mbə̀l</i>	slip	middle: body motion
<i>kù̀ndù̀l</i>	turn, twist (e.g. legs)	middle: body motion
<i>lá̀à̀l</i>	sneak	middle: body motion
<i>rìḡìl</i>	be pensive	emotional middle
<i>bó̀dəl</i>	be lost	one-participant middle
<i>á̀wòl</i>	escape	one-participant middle
<i>lò̀dəl</i>	spend the day	one-participant middle
<i>dò̀rhù̀l</i>	graze (oneself)	one-participant middle
<i>hwà̀à̀l</i>	watch, tend, herd	one-participant middle
<i>nù̀ríwù̀l</i>	become bad (e.g. meat)	middle: spontaneous (internally caused)
<i>ɟ̀èlɟ̀èl</i>	flow slowly	middle: spontaneous (internally caused)
<i>ù̀dà̀ḡìl</i>	flash (once)	middle: spontaneous (internally caused)

Table 66. *Synchronically transitive verbs with lexicalized -V_l*

<i>(k)á̀wù̀l</i>	refuse
<i>dó̀dà̀dəl</i>	peel (with hands, e.g. oranges or maize)
<i>míl(i)míl</i>	rub
<i>kwà̀dà̀dəl</i>	hold (on oneself)
<i>kə̀lò̀lò̀dəl</i>	steer

Verbs with the lexicalized *-V_l* can be used in telic (non-pluractional) and atelic (pluractional) contexts:

(332) *ìwórmáádòh àḡ-kólóòl dórdaàgà*
 PL.man PERF3-steer wheelbarrow
 ‘The men have steered a wheelbarrow.’
 (STH20190119 CM 1)

(333) *ìwórmáádòh céḡ-kólóòl dórdaàgà*
 PL.man IPFV3-steer wheelbarrow
 ‘The men are steering a wheelbarrow.’
 (STH20190119 CM 1)

As indicated in Table 65, the majority of the lexicalized verbs containing the petrified morpheme *-Vl* belong to the middle domain, thus conforming to the functional distribution of the productive (complementary) usage of *-Vl*. The middle verbs are intransitive, i.e. they form predicates where the subject is the sole core participant. The five transitive verbs in Table 66 are used in transitive predicates with two core participants; with them the direct object is obligatory and it follows the verb directly, without additional marking, as shown next:

(334) *wéèn céḡ-kwàdòl kárbááná*
 mother IPFV3-hold baby
 ‘The mother is holding the baby.’
 (12.04.09-08-03.wav)

Since the morpheme *-Vl* is petrified and synchronically constitutes an integral part of the verb root, the verbs listed in Table 65 and Table 66 can participate in valency-changing operations by taking other derivational morphemes; for example:

(335) *àn-tṣmbòl-àk à=yèèn*
 PERF3-slip-MID/REFL SOURCE=LOC1P
 ‘I forgot (lit. it slipped from me).’
 (04.10.07-192.wav)

It is noteworthy that in closely related Katla and Julut, no formally corresponding morpheme exists, although with other morphemes participating in valency-changing operations, an important overlap can be observed both formally and functionally.

Yet, for Proto-Bantu, a formally similar morpheme *-ɔl (-ɔd) has been reconstructed, labeled ‘separative’ by Schadeberg (2003). Interestingly, the separative morpheme *-ɔl (-ɔd) is described as being in complementary distribution with the morpheme *-ɔk, which is labeled ‘reversive’ (ibid.). For these reconstructed morphemes, the complementary distribution is claimed to pertain to transitivity: *-ɔl is used with transitive and *-ɔk with intransitive verbs (Schadeberg 2003). Furthermore, Schadeberg observes the low productivity of the reflexes of the suffix *-ɔl in Bantu languages (Schadeberg 2003: 77). Bostoen and Mundeke (2011: 210), based on the analysis by Schadeberg (2003), write that the reflexes of *-ɔl in present-day Bantu are “frequently observed, but cannot be freely used to derive ‘separative’ forms from base verbs. It is more lexicalized than other derivational verb suffixes [...]. Derived verbs containing this suffix are more prone to idiosyncratic semantic change.” That is, in modern-day Bantu languages, the cognate forms of the Proto-Bantu suffix *-ɔl also tend to be lexicalized, similar to what we observe in Tima.

I have not been able to look at the details of the analysis and the linguistic evidence to judge whether this reconstructed complementary pair *-ɔk/ *-ɔl (ɔd) expressing the intransitive/transitive alternation is commensurable with the complementary pair *-Vk* vs. *-Vl* in Tima, where the opposition applies to atelic vs. telic contexts, respectively. For example, it would be interesting to consider whether there are some semantic aspects (aside from the purely syntactic opposition transitive vs. intransitive referred to by Schadeberg (2003)) that could be regarded as correlating with the linguistic data from Tima. However, as we know from the literature on transitivity, a strong correlation between transitivity and telicity has been observed crosslinguistically. Hopper and Thompson (1980) set telicity as one of the parameters of transitivity, where high transitivity implies a telic aspect of the clause, whereas low transitivity is associated with atelicity. Likewise, Næss (2007: 118f) observes an interrelation between transitivity and aspect, whereby the imperfective (i.e. atelic) aspect correlates with a [-AFF] patient, thus focusing on the process/action itself rather than on the resultant state. The focus on the action itself may lead to the omission of the object due to its irrelevance, yielding an intransitive clause; hence the correlation between atelicity and intransitivity. In telic constructions, by contrast, the patient is affected in its entirety and is thus highly salient; consequently, a [+AFF] patient must be expressed, yielding a transitive clause. Thus, it is imaginable that in constructions with the reflexes of PB *-ɔk (marking intransitive clauses), the object is left unexpressed due to its [-AFF] status, resulting in the syntactic contrast between intransitive, i.e. atelic (marked with *-ɔk*), and transitive, i.e. telic (marked with *-ɔl*).

The above argument is of course highly speculative and needs thorough verification. Still, since the resemblance (albeit primarily formal) between Bantu and Tima in this respect is so conspicuous, I consider it worth mentioning here. It might be a worthwhile topic for further investigation.

3.3.7 Summary and concluding remarks

The detransitivizing function of the suffix *-Vk* in Tima subsumes the resultative, the anticausative, and the one-participant middle derivations. In the latter two functions, the suffix *-Vk* is in complementary distribution with the derivational detransitivizing suffix *-VI*, where the former marks atelic (including unbound events and /or plural participants) and the latter telic constructions.

The resultative derivation represents the most productive pattern among the three functions in terms of the number of attested instances; the derived resultative verbs show a transparent semantic relationship to their transitive bases; there are no lexicalized resultative verbs. The main restriction on the bases of the resultative derivation is that they are transitive with an agentive subject argument and a patientive object argument and, in terms of lexical aspect, they express non-states. The derived construction always presupposes an implicit external agent bringing about the resultant changed state denoted by the verb.

The anticausative derivation, while also highly productive in terms of its transparent semantic relationship to the underlying transitive base, presupposes the potential spontaneous change of state of the derived subject, i.e. without an external input of energy facilitating the change. Both the resultative and the anticausative constructions predominantly have inanimate subject participants of which the resultant changed states are predicated.

The one-participant middle derivation resembles the anticausative structurally in that it also uses distinct marking depending on whether the predicate is atelic or telic (i.e. *-Vk* vs. *-VI*). However, it differs from the two other detransitized constructions in the following respects. The one-participant middle derivation employing the suffix *-Vk* has low productivity: only five verbs exhibit the alternation pattern described for the resultative and anticausative, i.e. where the intransitive counterpart semantically corresponds to an underlying transitive base verb. The rest (32 entries) either do not have a transitive counterpart, even though they have two different

verb forms, either marked with *-Vk* or *-VI*, or they are lexicalized verbs with a petrified suffix *-Vk*. Furthermore, the subjects of one-participant middles are mostly animate, in contrast to the resultative and the anticausative derivation. The latter fact is logically linked to the semantic class of verbs subsumed under the one-participant middle function: most represented are body motion/ posture verbs, verbs denoting bodily processes, and verbs designating particular personal characteristics. These semantic classes show a strong association with animate participants who control the body motion, assume a body posture, undergo particular bodily processes, and are the bearers of particular characteristics (such as being homeless, jealous, etc.).

Despite the differences outlined above, all three functions have in common their conceptual closeness to the semantic category of the middle, broadly defined as an action or state affecting the subject or her/his interests (Lyons 1969), or describing actions or states within the sphere of the subject referent (e.g. Smyth 1974; Benveniste 1971 [1950]: 148; Shibatani 2006: 231). We can also add to this conceptual specification the morphosyntactic definition of the middle morpheme as encoding a “cluster of deagentivized (intransitivized) syntactic patterns” (Kulikov 2013: 265) that focus the activity expressed by the base verb on one single argument (subject). Both definitions, describing cross-linguistic phenomena, fit quite well with the situation in Tima. Notably, Dom et al. (2016) use the term ‘middle’ for the apparently cognate pan-Bantu suffix *-Ik*, to which I made reference in the analysis of the detransitivizing function of the Tima suffix *-Vk*.¹⁴⁵

In Chapter 2 on the derivational morpheme *-ak / -ak*, I also appealed to the notion of the middle as a semantic category expressing such events and actions as hold within the sphere of the syntactic subject. That is, in Tima, we encounter a situation where different grammatical categories play their part in expressing semantic aspects of the middle domain. Three such morphemes can be named for Tima:

- (1) *-ak / -ak*: reflexive, reciprocal, one-participant middle, and antipassive;
- (2) *-Vk*: resultative, anticausative, and one-participant middle;

¹⁴⁵ The authors employ the following definition: “Middle is a verbal category encoded by means of the verbal suffix that is used to encode a variety of closely related functions which (i) belong to the domain of voices and voice-related categories, (ii) focus the activity expressed by the base (most often, transitive) verb on one single argument, and (iii) syntactically, amount to intransitivization of the base verb” (Dom et al. 2016: 130).

- (3) *-VI*: anticausative and one-participant middle (in complementary distribution with *-Vk*, with *-VI* being used in telic and *-Vk* in atelic contexts).

There is a clear functional delineation between the functional scope of the suffix *-ak / -ak*, on the one hand, and the suffix *-Vk* and *-VI*, on the other, whereby the former can be described as an agent-oriented detransitivizing function and the latter as patient-oriented. Recall from the discussion in Chapter 2 on the distribution of the suffix *-ak / -ak* that derivations involving this morpheme are agent-preserving morphosyntactic operations where the derived intransitive subject corresponds to the underlying transitive subject. The analysis in the present chapter has shown that the derivations involving the suffix *-Vk* (in complementary distribution with *-VI*) present patient-oriented morphosyntactic operations, whereby the derived intransitive subject corresponds to the underlying direct object.

Thus, following Dom et al. (2016), we should consider the middle domain in Tima as a multiple-form system utilizing three different morphemes to express eventualities associated with the middle situation type. Dom et al. (2016), in their preliminary account of the middle category in Bantu languages, draw attention to the fact that the mainstream linguistic literature on the middle does not do justice to the linguistic situation in Bantu languages. So, for example, Kemmer (1993) postulates three possible types of middle systems: a one-form system where reflexive and middle situation types are encoded by one and the same morpheme; a two-form cognate system, where the two situation types are expressed by different but related elements; and a two-form non-cognate system, where reflexive and middle situation types use two distinct, unrelated linguistic elements. The authors (Dom et al. 2016) analyze Bantu languages as a fourth, multiple-form middle system, where several morphemes (verbal extensions) serve various functions covering different aspects of what has been considered a canonical middle (see Dom et al. 2016 for the list of morphemes belonging to the middle domain in different Bantu languages and their functional distribution).

Interestingly, for Bantu languages, the authors likewise note the division of labor between distinct markers of middle semantics depending on whether the eventuality is agent- or patient-oriented; this is similar to the situation in Tima. The peculiarity of Tima is, then, that the division of the functional scope occurs on two distinct levels: agent-oriented vs. patient-oriented semantics, on the one hand (*-ak / -ak* vs. *-Vk / -VI*), and atelic vs. telic middle, on the other (*-Vk* vs. *-VI*).

3.4 Conclusion to Chapter 3

This chapter examined the distributional properties of the suffix *-Vk* employed both in valence-increasing and valence-reducing operations. In terms of numbers, the attested cases of valence-decreasing functions prevail over the causative derivation that increases valency: 24 morphologically derived causative verbs, as opposed to more than 150 verbs with which the suffix *-Vk* has a detransitivizing effect.

At the beginning of the chapter, the question was formulated as to the nature of the seemingly contradictory multifunctionality observed in Tima: coincidental homophony or functional extension. The historical evidence formulated by Dimmendaal (2018) was adduced, pointing to the scenario of functional extension (see 3.1). Now, after all the analyzed data have been presented, we can also name some further observations that might be considered to support this hypothesis.

First, there is only one slot in the verbal structure that can be occupied by the morpheme *-Vk*, independent of the function, whether it is causative or one of the valence-reducing functions. That is, in Tima, the causative and resultative/anticausative/middle functions cannot cooccur with one given verb (in contrast to Bantu languages, where such a co-occurrence pattern is not precluded; see 3.3.3.4).

Second, we should mention the complementary distribution of the different readings of the suffix *-Vk* depending on the lexical properties of certain verbs: the particular interpretation of *-Vk* is lexically restricted and one and the same verb is only compatible with one meaning (aside from individual cases where a given verb receives either a causative or a resultative reading; however, in such cases, the intended meaning is disambiguated by the argument structure). It is a part of the definition of the functional extension of a grammatical element that it acquires a distinct interpretation in new contexts or constructions.

Another finding revealed by the analysis of the functional scope of the suffix *-Vk* is that its most productive function is the resultative. As was explicated in section 3.3.3, the resultative in Tima has much in common with the prototypical passive, in that the initial direct object moves into the subject position. There is, meanwhile, a large body of cross-linguistic evidence, both diachronic and synchronic, indicating that causative and passive-like situations can be expressed by one and the same morpheme. The causative-passive polysemy is widely attested

across languages (see e.g. Nicolai 1981 on Songhay; Keenan 1985: 262 on Korean; Plungian 1993 on Dogon; Nedjalkov 1993 on Manchu and Tungus languages; Robbeets 2007 on Trans-Eurasian languages; Knott 1990, 1998; Yap and Iwasaki 2003; and Yeon 2000 on Korean). Generally, the typological accounts converge on the idea of the conceptual affinity of the causative, on the one hand, and the passive-like constructions, on the other. Both situation types can be described as de-agentivizing, agent-defocussing, or in terms of the inactivization of the event (see e.g. Sakšena 1980b; Kittilä 2013; Haspelmath 1990). What we observe is that the causative and the resultative/anticausative both demote the initial subject, but in different ways. Consider, for illustration, the following example pairs (repeated):

- | | | | | | | | | | |
|-------|----|--------------------------|-------------------------------|-------------------------|--------------------------------|------------------------|---|-------------------------------------|-------------------------------|
| (336) | a) | <i>cíbal</i>
SG.child | <i>àŋ-wòdána</i>
PERF3-cry | ‘The child has cried.’ | b) | <i>píná</i>
PRON3SG | <i>àŋ-wòdáni-ik</i>
PERF3-cry-
CAUS | <i>cíbal</i>
SG.child | ‘(S)he made the child cry.’ |
| (337) | a) | <i>píná</i>
PRON3SG | <i>cén-ṣòl</i>
IPFV3-clean | <i>kihí</i>
SG.place | ‘(S)he is cleaning the place.’ | b) | <i>kihí</i>
SG.place | <i>àn-ṣòl-òk</i>
PERF3-clean-RES | ‘The place has been cleaned.’ |

In the case of the causative derivation shown in (336), the original subject of the (a) sentence leaves the subject position and is demoted into the postverbal syntactic position in the derived (b) sentence. Under the resultative derivation exemplified in (337), the subject of the underlying (a) predicate is deleted and is not expressed in the derived (b) predicate. Malchukov (2013, slide 21) notes fittingly: “The polysemy of the voice category performing both valency-increasing and valency-decreasing functions is puzzling, but can be accounted for if we assume that the common denominator of both processes is A-demotion.”

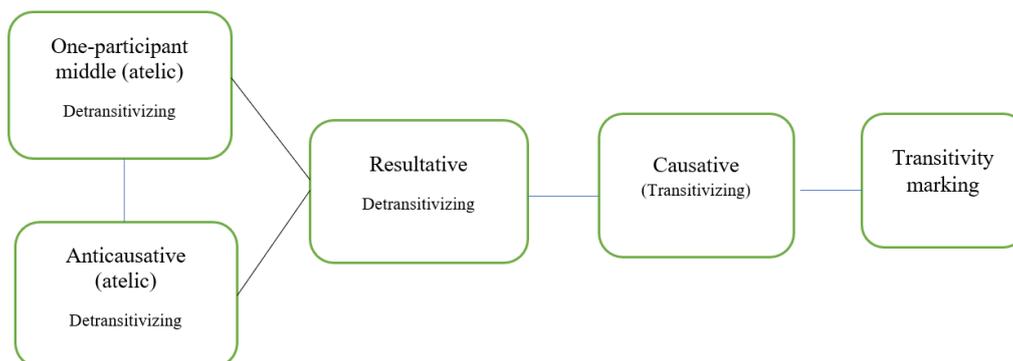
The absence of lexicalized resultative verbs in Tima compared to causative verbs may be seen as an indication of the direction of the functional extension – from causative to (the passive-like) resultative. This direction conforms to the development scenario of better-documented languages with causative-passive polysemy (see Haspelmath 1990).

Yet, while this explanation seems quite plausible in the case of the causative/resultative syncretism in Tima, the distribution of another two detransitivizing functions of *-Vk* (anticausative and middle) fits less straightforwardly into the typological pattern and also exhibit peculiarities language-internally that cannot be ignored. The most prominent distinction of these two functions, performed by the suffix *-Vk* from the resultative function, is telic (non-pluractional)/atelic (pluractional) contrasting marking in the case of the former and the lack of

such distinct encoding in the case of the latter. In section 3.3.6, I mentioned another Proto-Bantu morpheme, *-ok, labeled reversive by Shadeberg (2003), that is in complementary distribution with the suffix *-ol, a contrast that formally resembles the complementary usage of *-Vk* and *-Vl* in Tima, expressing atelic vs. telic anticausative and middle constructions, respectively. This distributional discrepancy in marking between the resultative function (and the causative as well), on the one hand, and the anticausative and middle, on the other, might indicate that diachronically distinct morphemes were used in different constructions. In the absence of unambiguous historical data, however, we probably cannot resolve this problem with sufficient clarity. A more in-depth investigation in this area will possibly enable the clarification of this uncertainty.

To conclude, the following semantic map of the synchronic distribution of the suffix *-Vk* in Tima summarizes the findings of Chapter 2:

Figure 14. The functional distribution of the morpheme -Vk in Tima (synchronic perspective)



Final notes

The aim of the present study was to establish semantic classes of verbs based on shared features of morphosyntactic behavior, in particular participation in valency alternations. The foregoing discussion has shown that the verbs compatible with the derivational morphemes *-ak / -ak* and *-Vk* do indeed form relatively coherent classes and subclasses sharing common semantic features. The two derivational morphemes explored, *-ak / -ak* and *-Vk*, are both multifunctional. It is precisely the verbal meaning that determines the particular reading of the derived construction, thus defining the specific function of the derivational morpheme in the given instance of usage.

Importantly, with different functions, both *-ak / -ak* and *-Vk* have varying degrees of productivity. With regard to the suffix *-ak / -ak* bearing middle-reflexive, reciprocal, and antipassive functions (all valency-decreasing), the antipassive function appears to be the most productive, followed by the reflexive-possessive function (a subfunction of the middle-reflexive). The suffix *-Vk*, in its current usage, is employed in causative constructions, thus increasing the valency, and it is used in such valency-decreasing constructions as the resultative, anticausative, and middle, the resultative being the most productive function, followed by the anticausative.

With both *-ak / -ak* and *-Vk*, the one-participant middle function is the less productive function viewed from the synchronic perspective; the majority of attested one-participant middles in both cases are lexicalized verbs.

As was noted in 3.3.7, in the realm of valency-changing operations, the two morphemes have a clear delineation of functions in that *-ak / -ak* serves as agent-preserving, and *-Vk* as patient-preserving. This delimitation of functions correlates to a substantial degree with the semantics of the base verbs: with agent-preserving alternations, the base verbs are more likely to be MANNER verbs that describe activities performed by an agentive participant. With patient-preserving operations, we are more often than not dealing with RESULT or change-of-state verbs that designate a new state of a patientive participant. With these verbs, the argument is that changes of state must be expressed after detransitivization at the expense of the agentive participant since, for human cognition, it is the saliently affected participant that has greater salience and thus relevance. This distribution – the agent-preserving derivation with MANNER verbs and the patient-preserving derivation with RESULT verbs – is especially prominent with the most productive function of each morpheme. With the suffix *-ak / -ak* this is the antipassive

function, where the base verbs denote various kinds of activities. With respect to *-Vk*, it is the anticausative function that takes change-of-state verbs as its derivational bases. Now, we said that the resultative is the most productive function of the suffix *-Vk*, and the anticausative goes next (in terms of the number of attested instances). However, as was shown in 3.3.3.5, the resultative derivation poses no explicit restrictions on the base verbs in terms of their semantics; the most evident discernible requirement is for the base verbs to be two-place non-state predicates. Thus, it seems safe to assume that the resultative derivation in Tima is akin to the passive formation (in languages that have passive), which likewise does not show specific semantic restrictions. For this reason, the resultative derivation is less suitable for recovering the underlying semantic components that enable the establishment of coherent semantic verb classes.

The anticausative derivation in Tima, in contrast, is restricted to base change-of-state verbs. It is in its anticausative function that the morpheme *-Vk* is most representative of the patient-preserving alternation with RESULT base verbs.

With these preliminary findings, it would now be interesting to look at the languages Katla and Julut, which are cognate with Tima. As mentioned already, Tima shares a fair amount in common with these languages with respect to verbal derivational morphology, so this could be a promising direction for a more in-depth inquiry into how the derivational morphemes in these two languages are distributed across their verbal lexicon.

Another point that was only touched on in the present study, but could be investigated in its own right, is the aspectual values associated with the derivational morphemes discussed. We have seen that the suffix *-ak / -ak* can be employed as an atelicity (pluractionality) marker without valency-related effects. Likewise, *-Vk* is associated with atelicity (pluractionality); however, in this case the atelicity value does not have an autonomous status but is connected to the valency-related function of the morpheme, at least as far as the observed data suggest.

The splitting off of the aspectual meaning as an autonomous function represents a phenomenon widely attested in Bantu and other Niger-Congo languages (Hyman 2018). Hyman (2018: 191), based on comparative data from a wide range of Niger-Congo languages, proposes “that valence extensions, i.e. those that have to do with argument structure, generally become pluractional, attenuative etc. by a three-stage process [...] First, valence marking affixes start to acquire aspectual meanings, which have spread areally. Then the aspectual meanings become primary, with gradually lexicalized, residual valence functions. The final stage is for the extensions to

have only an aspectual function.” Taking this grammaticalization model as a point of departure, we can state that Tima constitutes a language located between the first and second stages.

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Appendix

The list of verbs investigated and their attested derivations with valency-changing suffixes *-ak~-ak*, *-Vk*, and *-VI*

Notes:

The first column shows the verbal root. In case there is no unmarked usage of the root, it is followed by a dash sign “-“. The column *Basic valency* indicates in which argument structure the underived verb is used in its base form: intr- intransitivity markingitive, tr – transitivity markingitive structure. The notation “no” in the column *Basic valency* means that the verb in question represents a precategorial root (i.e. roots that must be derived for an appropriate morpheme to be used in a predicate). “Lab” indicates that the verb exhibits labile behavior, i.e. it can be used in both transitive and intransitive constructions. The columns *ipfv/atelic* and *pfv/telic* show the verb forms with the corresponding aspect prefix (imperfective or perfective) and the verbal root used in atelic (and /or imperfective)/ telic (and/or perfective) constructions. In case the verbs contain lexicalized (petrified) derivational elements, they are presented in corresponding columns without a morpheme boundary.

Explanation of notations:

“x” indicates that the extension by the corresponding morpheme is not possible;

“n.a.” (not attested) – the corresponding form not attested in the existing database (including own elicitations);

“n.p.” (not possible) – the corresponding aspectual morphological form is not possible.

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root- (ep)-(ht)	-ak ~ak mid/refl/ rec/ap/atelicy	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
bəŋ(ak)	intr	bark	cem-bəŋ(ak)	am-bəŋ(ak)	-bəŋak	bark	mid/refl	x			x		
bəŋ-	no	tear	cem-bəŋak-	am-bəŋak- y-i	-bəŋak	tear	atelicity marking	-bəŋak-ik	get torn	acaus (atelic)	-bəŋak-il	get torn	acaus (telic)
bərh	tr	wash	cem-bərh	am-bərh	-bərh-ak (+DO); -bərh-ak (noDO)	wash one's b.p; make the washing	mid/refl; ap	-bərh-ək	be washed	res	x		
bəraŋəl	intr	collapse	n.a.	am-bəraŋəl	n.a.			x			-bəraŋəl	collapse	mid
bila	intr	be(come). pregnant	n.p.	am-bila	x			-bilak-ik	impregnate	caus	-		
bə/bə	tr	put	n.p.	am-bə-ə	-bə-y-ak (+DO)	put on oneself	refl-poss	-bək-	put	transitivity marking	x		
brar/ braar	tr	peel	cə-braar	am-brar-ı	-braar-ak	peel	ap	-braar-ək	be peeled	res	x		
buluk/ biliya	intr	die	cem-biliya	am-buluk	x			-buluk	die	mid			
burhuk	intr	slide over	cem-burhuk	am-burhuk	x			-burhuk	slide over	mid	x		
caa	intr	come	n.p.	an-caa	x			x			x		
caak	aux	become	cən-caak	an-caak	x			x			x		
cakalak	intr	quarrel	cən-cakalak	an-cakalak	-cakalak	quarrel	rec	x			x		
cədu	intr	ripen	n.a.	an-cədu	x			x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
cəcəh	intr	be thin	n.p.	an-cəcəh-	x			-cəcəh-ək	become thin	mid	x		
cədem	tr	pick (seeds)	cən-cədem	an-cədem	-cədem-ak	pick (seeds)	mid/refl	-cədem-ək	be collected	res	x		
cərcər	tr	write, carve	cən-cərcər	an-cərcər	-cərcər-ak	write	ap	-cərcər-ək	be written	res	x		
(c)eel/ keel	tr	buy	cən-ceel	an-ceel	x			-ceel-ik	sell/ be sold	caus/ res	x		
ciləŋ	tr	rinse	cən-ciləŋ	an-ciləŋ-ɪ	x			-ciləŋ-ək	be rinsed	res	x		
cɪ	intr	go, enter, arrive	n.p.	an-cɪ	-cɪ-y-ak (+DO)	put on oneself	mid/refl	-cɪ-y-ɪk	put it	caus	x		
(c)ih	?	milk	cən-cih	an-cih	x			n.a.		n.a.			
cɪlawo	intr	get tired	n.p.	an-cɪlawo	x			-cɪlawo-ək	exhaust 3P	caus	-cɪlawoɪ		mid
cɪm	tr	gather	cən-cɪm	an-cɪm-ɪ	x			-cɪm-ək	gather, aggregate	acaus (atelic)	-cɪm-əl	gather, aggregate	acaus (telic)
cɪrəŋ-	no	surround, encircle	cən-cɪrəŋ-ək	an-cɪrəŋ-əl	x			-cɪrəŋ-ək	take on a surrounding position, encircle (atelic)	mid	-cɪrəŋ-əl	take on a surrounding position, encircle (telic)	mid
cɪrər	tr	clean, brush (teeth)	cən-cɪrər	an-cɪrər	-cɪrər-ak (+DO)	brush one's teeth	mid/refl	-cɪrər-ək	be brushed	res	x		
(c)ibi	tr	roast meat	cən-cibi	an-cibi-ɪ	x			-cibi-ik	be roasted	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
cikɬak	intr	complain	cɛŋ-cikɬak	aŋ-cikɬak	-cikɬak	complain	mid/refl	x			x		
cirm-	no	be dark	cɛn-cirm-ik	an-cirm-ik	x			-cirm-ik	become dark	acaus.atel	-cirm-il	become dark	acaus.tel
cɔɔŋ	intr	arrive	cɛn-cɔɔŋ	an-cɔɔŋ	x			x			x		
cɔɔ	tr	stab (once)	cɛn-cɔɔ	an-cɔɔ	-cɔɔ-w-ak	stab oneself	mid/refl	-cɔɔ-w-ɜk	be stabbed	res	x		
da-	tr	touch	cɛn-da-ak	an-da-y-ɪ	-da-ak	touch	atelicity marking	x			x		
daa	intr	run	cɛn-daa	an-daa	x			x			x		
dah-	tr	say	n.p.	an-dah-ɪ	x			x			x		
daala	intr	play	cɛn-daala	an-daala	x			x			x		
dahɔ-	no	be greedy, suspicious	cɛn-dahɔ-	an-dahɔ-	x			-dahɔ-ok	be greedy, suspicious	mid.atel	-dahɔ-ol	be greedy, suspicious	mid.tel
dara	tr	like	cɛn-dara	an-dara	x			x			x		
daɬok	tr	winnow	cɛn-daɬok	an-daɬok	x			-dato-ok	be winnowed	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V _k CAUS/acaus/ mid/res	Translation	Function	-V _l mid/acaus	Translation	Function
dak	tr	hit, beat	cen-dak	an-dak	x			-dak-ik	hit	transitivity marking			
dawi	tr	bend	cen-dawi	an-dawi	x			-dawuy-ik	be bent	res	x		
dεε	tr	take (uncountable, liquids)	cen-dεεk	an-dεε-y-ɪ	x			-dεεk	take (repeatedly)	transitivity marking.	x		
dema-	no	swallow	cen-dema(na)-ak	an-deme-y-ɪ	-dema(na)-ak	swallow (with or without DO)	mid	x			x		
dɪk	intr	go (away)	cen-dɪk	an-dɪk	x			-dɪk-ik	help walk, lead	caus	x		
dɪyak	aux	be(come)	cen-dɪyak	an-dɪyak	x			x			x		
dɪyana	intr	laugh	cen-dɪyana	an-dɪyana	x			-dɪyanɪ-ik	make laugh	caus	x		
dii	tr	tie	cen-dii	an-dii	-dɪk-ak	tie (one's hair)	mid/refl	-dɪk-ik	be tied, entangled	res	x		
dindiŋ	intr	think	cen-dindiŋ	an-dindiŋ	x			x			x		
dɪŋɔɔŋ	tr	bring	n.p.	an-dɪŋɔɔŋ	x			x			x		
dɪɔɔ	tr	twine, plait	cen-dɪɔɔ	an-dɪɔɔ	x			-dɪɔɔ-ik	be twined, plaited	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
dirinjAŋAk	intr	stagger	cen-dirinjAŋAk	an-dirinjAŋAk	-dirinjAŋAk	stagger	mid/refl	x			x		
dədoh	tr	provoke, despise	cen-dədoh	an-dədoh	-dədoh-ak	provoke	mid/refl	n.a.			x		
dədol	intr	peel, scratch	cen-dədol	an-dədol	x			x			-dədol	scratch oneself	mid
dələk	tr	sow	cen-dələk	an-dələk	-dələ-w-ak	sow, be sowing	ap	-dələk	sow	transitivity marking	x		
dəw/dw	intr	stand (up), stop	n.p.	an-dəw	x			-dəw-y-ik or -dəw-y-uk (telic)/ -dəwε-ek (atelic)	start (motor); raise, wake someone up	caus	dəw dəwel	stand (up), stop (intransitivity marking.)	mid.
dəya	tr	steal	cen-dəya	an-dəya	-dəy-ak	steal (habitually)	ap/ atelicity marking	-dəy-ik	be stolen	res	x		
dəwa	intr	descend	cen-dəwa	an-dəwa	x			dəwa-y-ik	reduce it; help go down	caus	x		
dudu	tr	show, explain	cen-dudu-u	an-dudu-w-i	-dudu-w-ak	study	mid/refl	-dudu-uk	be shown	res	x		
duh	tr	sniff, smell	cen-duuh	an-duh-i	-duh-ak	sniff; <i>idiom. pray</i>	mid/refl	-duh-uk	be unconscious	mid.atel	-duh-ul	be unconscious	mid.tel

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
dukuk	lab	drip	cen-dukuk	an-dukuk	x			-dukuk	drip it; drip (by itself)	caus/transitivity marking; acaus	x		
dumuy	tr	reduce, lower	n.p.	an-dumuy-i	x			-dumuy-ik	reduce, become less	acaus.atel	-dumuy-il	reduce, become less	acaus.tel
duŋkuruk	lab	pile up	cen-duŋkuruk	an-duŋkuruk	x			-duŋkuruk	be piled up; pile it up (iter./dur.)	res: caus/transitivity marking	x		
dup-	no	descend	cen-dup-uk	an-dup-uk an-dup-ul	x			-dup-uk	descend, go down	mid.atel	-dup-ul	descend, go down	mid.tel
haal/ hwaal	tr	graze, watch	ce-haal	a-haal	x			x			x		
hambir	tr	topple	ce-hambir	a-hambir-i	x			n.a.			n.a.		
həda	no	leap (over smth)	ce-həda-ak (+DO)	a-həda-y-i +DO	x			-həda-ak	lea	mid.atel	-həda-al	leap	mid.tel
həlak	intr	stay	ce-həlak	a-həlak	-həlak	stay	mid/refl	x			x		
hə(n)dana / həndəno	intr	sit (down)	ce-hədana	a-hədana	x			-hə(n)don-ɬ-ik -hədanı-ik	seat (telic) seat (atelic)	caus	x		
hi	tr	know	n.p.	a-hi-i	x			x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
hūr-	no	shrink	ce-hūr-ik	a-hūr-ik (atel) a-hūr-il (tel)	x			-hūr-ik	shrink	mid.atel	-hūr-il	shrink	mid.tel
hīl(m)ḡk	tr	send	ce-hīl-ik	a-hīl(m)ḡ- ik	x			-hīl(m)ḡ-ik (sg) -hīl-ik (pl)	send	caus/transitivity marking	x		
hibi	tr	stab (plur)	ce-hibi	a-hibi-i	-hibi-y-ak	stab oneself	mid/refl	-hibi-ik	be stabbed (plur)	res	x		
hīl-	tr	fell (tree)	ce-hīl	a-hīl-ik	x			-hīl-ik; -hīlḡ-ik	fell it; be felled	caus; res	x		
hōlōm-	no	envy	ce-hōlōm-ōk	a-hōlōm- ōk (atel), a-hōlōm-ōl (tel)	x			-hōlōm-ōk	envy	mid.atel	-hōlōm-ōl	envy	mid.tel
hō	tr	hit (once)	n.p.	a-hō-ō	-hō-y-ak	hit oneself	mid/refl	-hō-y-ōk	be hit	res	x		
hu-	tr	kindle	ce-huu	a-hu-w-i	x			n.a.			x		
hum	tr	put	ce-hum	a-hum-i	-hum-ak	put it onto oneself	mid/refl	-hum-uk	be put	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V/ CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
howana	intr	be dry,empty	ce-howana	a-howana	x			-howanɬ-ək	empty it; be emptied	caus; res	x		
hundu-	intr	jump	ce-hundu-uk	a-hundu-uk (atel), a-hundu-ul (tel)	x			-hundu-uk	jump	mid.atel	-hundu-ul	jump	mid.tel
huuɬ	tr	pour	ce-huuɬ	a-huuɬ	x			-huuɬ-uk	be poured	res	x		
hwaya	tr	peel (e.g. potatoes)	ce-hwaya	a-hwaya	x			-hwayɬ-ək	be peeled	res	x		
hweel	intr	whistle	ce-hweel	a-hweel	x			x			x		
irɬʌk	intr	blow nose	ceŋ-irɬʌk	aŋ-irɬʌk	-irɬʌk	blow one's nose	mid/refl	x			x		
jijik	tr	sieve, filter	ceŋ-jijik	aŋ-jijik	x			jijik	sive, filter	transitivity marking	x		
kaar-	no	grow	ceŋ-kaar-	aŋ-kaar-	-kaar-ak	grow	mid/refl	-kaar-ək	grow it	caus	x		
(k)ah-	ditr	give	ceŋ-kahi-/ ce-hi	aŋ-kahi/ a- hi	x			-hiɬ-ək	be.given	res			

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
kadohadohok	intr	move hips	ce-kadohadohok	aṅ-kadohadohok	x			-kadohadohok	move hips	mid	x		
(k)ahnik	ditr	show	ceṅ-kahnik	aṅ-kahnik	x			-kahnik	show		x		
(k)aləm	tr	bite	cen-limi	aṅ-kaləm	-kaləm-ak	bite oneself; bite	mid/refl; ap	-kaləm-ək	be bitten	res			
kalnik	lab	(let) stay	ceṅ-kalnik	aṅ-kalnik	x			-kalnik	stay; let stay	mid: caus			
(k)ama-	no	wash, bathe	ceṅ-kama-	aṅ-kama-	-kama-ak	wash oneself	mid/refl	-kam-ək	wash, bathe someone	transitivity marking			
(k)aməlak	intr	exorcise	ceṅ-kaməlak	aṅ-kaməlak	-kaməlak	exorcise	mid/refl	x			x		
kapaak	intr	survive	ceṅ-kapaak	aṅ-kapaak	-kapaak	survive	mid/refl	x			x		
karaa	intr	spend the night	ceṅ-karaa	aṅ-karaa	x			x			x		
kaṛaṛa	intr	leave, go away	ceṅ-kaṛaṛa	aṅ-kaṛaṛa	x			-kaṛaṛi-ik	let go, distribute	caus	x		
(k)aṭam/ ṭimi	intr	leave, go away	cen-ṭimi	aṅ-kaṭam	x			-kaṭam-ək -ṭimi-ik	leave out, let go (tel); leave out, let go (atel)	caus caus	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root- (ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V _k CAUS/acaus/ mid/res	Translation	Function	-V _l mid/acaus	Translation	Function
(k)atək	tr	increase, add	n.a.	aŋ-kaṭək	x			-kaṭək	increase it	caus/transitivity marking	x		
(k)ay-	no	suck (milk)	ceŋ-kay-	aŋ-kay-	-kay-ak	suck (milk)	mid/refl	-kay-ɪk	brestfeed	caus	x		
(k)ayaa	intr	swim	ceŋ-kayaa	aŋ-kayaa	x			x			x		
(k)awa	tr	mold, shape pots from dung	ceŋ-kawa	aŋ-kawa	n.a.			n.a.			n.a.		
(k)awəl	intr	escape	ceŋ-kawəl	aŋ-kawəl	x			x			-kawəl	escape	mid
(k)awon	intr	move	ceŋ-kawon	aŋ-kawon	x			-kawon-ək/ -kawonɪ-ɪk	move it	caus	x		
(k)abu	tr	dig	ceŋ-kabu	aŋ-kabu- y-i	-kabu-y-ak	be digging	ap	-kabu-y-uk	dig (holes) <i>pluract</i> ; be dug out	transitivity marking; res			
(k)abuh	tr	raost (coffee)	ceŋ-kabuh	aŋ-kabuh	x			x			x		
(k)ahuk	tr	pour	ceŋ-kahuk	aŋ-kahuk	x			-kahu _k ; -kahu-uk	pour it; be poured	transitivity marking; res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
kakuwak	intr	soak	ceŋ-kakuwak	aŋ-kakuwak	-kakuwak	soak	mid/refl	x			x		
(k)alal-	no	eat/feed	ceŋ-kalal-ak	aŋ-kalal-ak	-kalal-ak (with or without DO)	eat	mid/refl	-kali-ik; -kal-uk (+DO)	feed; eat	caus; transitivity marking	x		
(k)amuh	aux; tr	let, allow; leave	n.p.	aŋ-kamuh	x			-kamuh-uk	be left	res	x		
(k)ariyak	intr	speak	ceŋ-kariyak	aŋ-kariyak	-kuriyak	speak	mid/refl	x			x		
(k)at̥u	intr	lie, sleep	ceŋ-kat̥u	aŋ-kat̥u	x			-kat̥j-y-ik/ -kat̥j-uk	lay it down, bring to bed;	caus	x		
(k)at̥uk	tr	hunt	ceŋ-kat̥uk	aŋ-kat̥uk	-kat̥k-w-ak	be hunting	ap	-kat̥uk	hunt	transitivity marking.	x		
(k)awul	tr	deny, refuse	ceŋ-kawul	aŋ-kawul	x			x			x		
keŋ	intr	lean	ceŋ-keŋ	aŋ-keŋ	x			-keŋ-ik	lean it	caus	x		
(k)əmah	tr	eat	ceŋ-kəmah	aŋ-kəmah	x			x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vt CAUS/acaus/ mid/res	Translation	Function	-Vt mid/acaus	Translation	Function
kəpa(y)ak	tr	catch, hold	ceŋ-kəpa-ak	aŋ-kəpa-ak (atel), aŋ-kəpa-ak (tel)	-kəpa(y)-ak	catch, hold (with/for oneself)	mid/refl	x			x		
(k)eeni	tr	grind	ceŋ-keeni	aŋ-keeni	x			-keeni-ik	be grinded	res	x		
kīheŋ	tr	sort from dirt (e.g. sorghum)	ceŋ-kīheŋ	aŋ-kīheŋ	x			-kīheŋ-ək	be sorted	res	x		
kīlŋ	intr	get in front, overtakte	ceŋ-kīlŋ	aŋ-kīlŋ	x			x			x		
kidawudΛ wuk	intr	turn, circle	ceŋ- kidawudΛwu k	aŋ- kidawudΛ wuk	x			- kidawudΛwuk	turn, circle	mid	x		
kidik	intr	fall	ce-kidik	aŋ-kidik	x			-kidik	fall	mid	x		
kidime	tr	close	ce-kidime	aŋ-kidime- y-i	x			-kidime-ek	close	acaus.atel	-kidime-el	close	acaus.tel
kīlŋΛk/ lŋΛk	intr	watch, look after	ceŋ-kīlŋΛk	aŋ-kīlŋΛk	-kīlŋΛk	watch, look after	mid/refl	x			x		
kīmΛn	intr	be stiated	n.p.	aŋ-kīmΛn	x			-kīmΛn-ik	satiate	caus	x		
kəha	tr	clean field	ceŋ-kəha	aŋ-kəha	x			-kəhaŋ-ək	be cleaned	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
кәкәw	tr	pinch	сәң-кәкәw	аң-кәкәw- 1	x			x			x		
кәләл	tr	steer	сәң-кәләл	аң-кәләл	x			-кәләл-әк	be steered	res	x		
кәмәр/ кәмәр	tr	pinch	сәң-кәмәр	аң-кәмәр-1	x			x			x		
кәә	intr	walk	сәң-кәә	аң-кәә	x			x			x		
кәyә	tr	make, build, prepare	сәң-кәyә-ә	аң-кәyә-ә	x			-кәyәк	be made, prepeared, built	res	x		
кәyәк	intr.	cook	сәң-кәyәк	аң-кәyәк	-кәyәк	cook	ap	x			x		
кәrәm	tr	cut, cross	сәң-кәrәm	аң кәrәm-1	-кәrәm-ak	harvest	ap	-кәrәm-әк	be cut	res	x		
кәdә	tr	take, accept	сәң-кәdә-ә	аң-кәdә- w-1	-кәdә-w-ak; -кәdә-y-ak	be married; take for oneself (idiom. spread (of flood, fire etc., see next entry))	rec; mid/refl	x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
kodiyak/ kodook	intr	spread (of flood, fireetc.)	ceη-kodo-ok	aη-kodi-yak	-kodi-yak	spread (telic)	mid/refl	-kodook	spread	acaus-atel	x		
kodowak	intr	be married	n.p.	aη-kodowak	-kodowak	be married	rec	x			x		
kokomak	lab	chew (dry food)	ceη-kokomak	aη-kokomak	-kokomak	chew (dry food)	mid/refl	x			x		
kohor	tr	slaughter	ceη-kohor	aη-kohor-ı	x			-kohor-ok	be skaughtered	res.	x		
kokohak	lab	gnaw	ceη-kokohak	aη-kokohak	-kokohak	gnaw (with or without DO)	mid/refl	x			x		
kolohak	intr	go in circle	ceη-kolohak	aη-kolohak	-kolohak	go in circle	mid/refl	x			x		
kone-	tr	help, ban, prevent, refuse	ceη-kone	aη-kone	-kone-y-ak idλ; -kone-y-ak κλhunen; -kone-y-ak cibλ ayıhı	help each other; divorce the woman; give up brest feeding	rec;	x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
kōtɪ	tr	take	ceŋ-kota	aŋ-kōtɪ	x			x			x		
kōtorak	tr	take for/with oneself	n.p.	aŋ-kōtorak	-kōtorak	take for oneself	mid/refl	x			x		
kudʌŋdʌŋ -	tr	roll it, flip it over	ceŋ-kudʌŋdʌŋ	aŋ-kudʌŋdʌŋ-i	x			-kudʌŋdʌŋ-ik	roll	mid	x		
kudunduk	tr	shape balls	ceŋ-kudunduk	aŋ-kudunduk	x			-kudunduk	shapeballs	caus/transitivity marking.			
kuduyuk	tr	begin	n.p.	aŋ-kuduyuk				-kuduyuk	begin it	caus/transitivity marking	x		
kulii	intr	fear	ceŋ-kulii	aŋ-kulii	x			-kuli-ik	frighten	caus	x		
kulum	tr	color it (in dark colors)	ceŋ-kulum	aŋ-kulum	x			-kulum-uk	get dark	acaus.atel	-kulum-ul	get dark	acaus.tel
kumok	intr	dance (a special dance)	ceŋ-kumok	aŋ-kumok	x			-kumok	dance	mid	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
kumun	tr	find, see	ceŋ-kumun	aŋ-kumun	-kumun-ak; -kumun-ak idek na NP	recognize, remember; meet with s.o.	mid/refl; rec.	-kumun-uk	be found	res	x		
kundul	tr	turn it inside out	ceŋ-kundul	aŋ-kundul- i	x			x			x		
kurak	intr	dance (a special dance)	ceŋ-kurak	aŋ-kurak	-kurak	dance (a special dance)	mid/refl	x			x		
kurh	tr	push	ceŋ-kurh	aŋ-kurh-i	-kurh-ak	push each other	rec	-kurh-uk	be pushed	res	x		
kuub/ kub	tr	cover	ceŋ-kuub	aŋ-kub-i	-kub-i-y-ak; -kuub-ak	cover oneself (sg); cover oneself (pl)	mid/refl	x			x		
kuun	intr	give birth	ceŋ-kuun	aŋ-kuun	x			-kuun-uk	help deliver	caus	x		
kwaar(- yaŋ)	tr	increase	ceŋ-kwaar-	aŋ-kwaar-	x			x			x		
kwaat-	no	dress, wear	ceŋ-kwaat-	aŋ-kwaat-	-kwaat-ak	dress oneself, put it on oneself	mid/refl	-kwaat-ik	dress someone	transitivity marking	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V _k CAUS/acaus/ mid/res	Translation	Function	-V _l mid/acaus	Translation	Function
kwadəl	tr	babysit	ceŋ-kwadəl	aŋ-kwadəl	x			-kwadəl-ək	hold (baby)	transitivity marking.	kwadəl	babysit	?
kwala	tr	hide	n.p.	aŋ-kwala	x			x			x		
kwarəl	intr	cough	ceŋ-kwarəl	aŋ-kwarəl	x			x			-kwarəl	cough	mid
kwatək-	tr	depend	ceŋ-kwatək-	aŋ-kwatək-	x			-kwatək	depend	transitivity marking.	x		
kwalar	tr	cut (bread)	ceŋ-kwalar	aŋ-kwalar	x			-kwalar-ik	be cut	res	x		
kwarih	tr	grind, crush	ceŋ-kwarih	aŋ-kwarih	x			-kwarih-ik	be ground	res	x		
kwe	tr	hold	ceŋ-kwəkwe	aŋ-kwε-ε	-kwəkwa-ak	hold each other	rec	x			x		
kwiya	aux	be (there)	ŋ-kwiya	n.p.	x			x			x		
k(w)otək	lab	shake, waggle	ceŋ-k(w)otək	aŋ-kwotək	x			-k(w)otək	shake it; be shaken	caus; res	x		
laal/lala	tr	follow, sneak	ce-laal	a-lala	x			-lalɿ-ək	be followed	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
laay	tr	cook	ce-laay	a-laay	x			n.a.			x		
laamak	lab	eat a little bit	ce-laamak	a-laamak	-laamak	eat a little bit	mid/refl	x			x		
leel/lele	tr	separate	ce-leel	a-lele	x			-lele-ək	be separated	res	x		
leem/lem	tr	taste	ce-leem	a-lem-ı	-leem-ak	taste	mid/refl	x			x		
lelmök	intr	shout	ce-lelmök	a-lelmök	x			-lelmök	shout	mid	x		
lewö(lewö)	tr	blink, wink	ce-lewölewö	a-lewö	x			-lewölewök	blink (eyes), wink	mid	x		
lilyak	intr	infiltrate	ce-lilyak	a-lilyak	-lilyak	infiltrate	mid/refl	x			x		
liḡak	tr	watch, care	ce-liḡak	a-liḡak	-liḡak	watch, care	mid/refl	x			x		
lööh/löh	tr	mix	ce-lööh	a-löh-a	x			-löh-ək	mix	acaus.atel	-löh-öl	mix	acaus.tel
lööl	intr	spend the day	ce-lööl	a-lööl	x			x			-lööl	spend the day	mid
löpök	intr	cry for no reason	ce-löpök	a-löpök	x			-löpök	cry for no reason	mid	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
luu/li	tr	press down	ce-luu	ce-li-w-i	x			x			x		
maamʊ	intr	yawn	ce-maamʊ	a-maamʊ	x			x			x		
mʌmhʌk	lab	suck	ce-mʌmhʌk	a-mʌmhʌk	-mʌmhʌk	suck	mid/refl	x			x		
mʌʔʌk	intr	glance	n.p.	a-mʌʔʌk	-mʌʔʌk	glance	mid/refl	x			x		
mələɛ	tr	wait	ce-mələɛ	a-mələɛ	-məl-ak	wait	mid/refl	x			x		
məna	tr	take part from smth.	ce-məna	a-məna	x			-məna-y-ik	reduce	acaus.atel	-məna-y-il	reduce	acaus.tel
mərn	tr	divide it, split it	ce-mərn	a-mərn-i	x			-mərn-ik	divide	acaus.atel	-mərn-il	divide	acaus.tel.
mɛɛy	tr	look at	n.p.	a-mɛɛy-i	x			x			x		
mehene	tr	let, give up	ce-mehene	a-mehene	x			x			x		
mihii	tr	chase	ce-mihii	a-mihii	x			-mih-ik	be chased	res	x		
miih/mih	tr	smear	ce-miih	a-mih-i	-mih-ak	wipe off oneself	mid/refl	-mih-ik	be smeared	res	x		
mini	tr	cook	ce-mini	a-mini-i	-mini-y-ak	cook	ap	-mini-ik	be cooked	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
minʌʌʌ	tr	find, trace	ce-minʌʌʌ	a-minʌʌʌ	x			-minʌʌe-ek	be found	res	x		
mintʌk	intr	hear, listen	ce-mintʌk	a-mintʌk	-mintʌk	hear, listen	mid/refl	x			x		
mohak	intr	pull out seeds	ce-mohak	a-mohak	-mohak	pull out seeds	ap	x			x		
mook	lab	drink	ce-mook	a-mook	-moo-ək -mo-w-ak	drink	mid/refl	-mök-ək	give to drink	caus	x		
molohok	tr	destroy by treading	ce-molohok	a-molohok	x			-molohok	destroy by treading	caus	x		
moʒumoraʌk	intr	plead	ce-moʒumoraʌk	a-moʒumoraʌk	-moʒumoraʌk	plead	mid/refl	x			x		
morayɪ	tr	plaster	ce-morayɪ	a-morayɪ	-moray-ak	plaster	ap	-moray-ɪk	be plastered	res	x		
moʒaʒ	tr	spin it	ce-moʒaʒ	a-moʒaʒ-ɪ	x			-moʒaʒ-ək	spin	mid	x		
mududuwaʌk	intr	rinse the mouth	ce-mududuwaʌk	a-mududuwaʌk	-mududuwaʌk	rinse the mouth	mid/refl	x			x		
muhi(yaŋ)	tr	try	ce-muhi=yaŋ	a-muhi=yaŋ	x			x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V/ CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
muluk	intr	hide	ce-muluk	a-muluk	x			-muluk	hide	mid	x		
munmun	intr	smile	ce-munmun	a-munmun	x			x			x		
mununu-	no	itch, feel numb	ce-mununu-	a-mununu-	-mununu-w-ak	itch	mid/refl	-mununu-uk	feel numb	mid	x		
muun/ mun	tr	insult	ce-muun	a-mun-i	-muun-ak	insult each other	rec	-muni-ik	be insulted	res	x		
muur/mur	tr	gnaw it, bite it off	ce-muur	a-mur-i	x			-muur-ik	be bitten off	res	x		
ɲaah	tr	look, see, watch	ce-ɲaah	a-ɲaah	-ɲaah-ak	look, watch	mid/refl	x			x		
ɲaak	tr	make	ce-ɲaak	a-ɲaak	-ɲaak	make	?	x			x		
ɲalhak	lab	lick	ce-ɲalhak	a-ɲalhak	-ɲalhak	lick	mid/refl	x			x		
ɲaŋh	tr	scratch it	ce-ɲaŋh	a-ɲaŋh	-ɲaŋh-ak	scratch oneself	mid/refl	ɲaŋh-ək	itch	mid	x		
ɲʌʌl/ɲʌl	lab	smell, sniff	ce-ɲʌʌl	a-ɲʌl-i	-ɲʌʌl-ak	smell, sniff	mid/refl	x			x		
ɲʌn	tr	carry it	ce-ɲʌn-ak	a-ɲʌn-i	-ɲʌn-ak	carry on oneself	mid/refl	x			x		
ɲʌlək	tr	scoop	ce-ɲʌlək	a-ɲʌlək	-ɲʌlək-w-ak	scoop	ap	-ɲʌlək	scoop	transitivity marking.	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V/ CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
ɲwarak	intr	snore	cɛɲ-ɲwarak	a-ɲwarak	-ɲwarak	snore	mid/refl	x			x		
ɲuruwul	intr	become bad	ce-ɲuruwul	a-ɲuruwul	x			x			-ɲuruwul	become bad	mid
panook	intr	breath, pant	cɛm-panook	am-panook	x			-panook	breath, pant	mid	x		
para	tr	clean it (field)	cɛm-para	am-para	-para-ak	clean (field)	ap	-paraɣ-ək	be cleaned	res	x		
payɪ	tr	spread	cɛm-payɪ	am-payɪ	x			-payɪɣ-ək	be spread	res	x		
ɣakik	tr	throw it, arrange it	cɛm-ɣakik	am-ɣakik	x			-ɣakik	throw, arrange	transitivity marking.	x		
ɣalɣak	intr	cut oneself	cɛm-ɣalɣak	am-ɣalɣak	-ɣalɣak	cut oneself	mid/refl	x			x		
ɣalɣak	tr	empty stomach (when slaughtering)	ce-ɣalɣak	am-ɣalɣak	x			x			x		
ɣəla	tr	like, look for, want	cɛm-ɣəla	am-ɣəla	-ɣəla-ak	look for smth.	mid/refl	x			x		
ɣərana	intr	urinate	cɛm-ɣərana	am-ɣərana	x			x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
pərr/pər	tr	take (plural objects)	cəm-pərr	am-pər-ɪ	-pərr-y-ak	take for oneself, hold on oneself		-pərr-ɪk	be taken	res	x		
pəɹ	tr	lean it, lay it(down)	cəm-pəɹ	am-pəɹ-ɪ	-pəɹɪt-y-ak	lean on oneself	mid/refl	-pəɹ-ək	lean back, lie down	mid.atel	-pəɹ-əl	mid.tel	
pəer	tr	sharpen	cəm-pəer	am-pəer	x			-pəer-ək	be sharpened	res	x		
pɪɫaŋ	intr,	make fire (including preparation)	cəm-pɪɫaŋ	am-pɪɫaŋ	x			x			x		
pɪɹɪ	tr	light up fire, shoot it	cəm-pɪɹɪ	am-pɪɹɪ	x			-pɪɹɪ-ɪk; -pɪɹ-ɪk	sparkle; light it up	acaus.atel caus	-pɪɹɪ-ɪl	sparkle	acaus.tel
piin	intr	be quiet	n.p.	am-piin	x			x			x		
pɪlɒŋ	tr	expand it	n.p.	am-pɪlɒŋ-ɪ	x			-pɪlɒŋ-ɪk	expand	acaus.atel	-pɪlɒŋ-ɪl	expand	acaus.tel
pɪɹɪ-	no	get free/ set free	cəm-pɪɹɪ-	am-pɪɹɪ	-pɪɹɪɫ-ak	flee, snatch free	refl/mid	-pɪɹɪ(ɫ)-ɪk	set s.o. free	caus	x		
pəno	intr	be quiet	n.p.	am-pəno	x			-pənoɫ-ɪk	quieten s.o., calm s.o. down	caus	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
pɔɔr	tr	refuse	cɛm-pɔɔr	am-pɔɔr	x			-pɔɔr-ɔk	leave angrily	mid	x		
puruur	tr	stir it, thindown	cem-puruur	am-puruur	-puruur-ak	stir	ap	-puruur-uk	stir it(pluractional)	transitivity marking. (atelicity marking)	x		
puɽu	tr	warm it up	n.p.	am-puɽ-i	x			-puɽu-uk	warm up	acaus.atel	-puɽu-ul	acaus.tel	
puuk	intr	blow moth	cem-puuk	am-puuk	-puuh-ak	puff up oneself		-puuk	blow mouth	mid	x		
puul/puli	tr	blow smth. off, wisthle after someone	cem-puul	am-puli	x			-puul-uk	be blown off	res	x		
puyi	tr	throw	n.p.	am-puyi	x			-puy-uk	throw (plural)	transitivity marking. (atelicity marking)	x		
ɽaaɽɛl	intr	move aside	cɛ-ɽaaɽɛl	a-ɽaaɽɛl	x			x			-ɽaaɽɛl	move aside	mid
ɽamɔɽ	tr	admonish s.o., criticize s.o.	cɛ-ɽamɔɽ	a-ɽamɔɽ	-ɽamɔɽ-ak	admonish, criticize	ap	x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vt CAUS/acaus/ mid/res	Translation	Function	-Vt mid/acaus	Translation	Function
ʃamiʃ	tr	twist it, roll it	ce-ʃamiʃ	a-ʃamiʃ-i	x			-ʃamiʃ-ik	roll up	acaus.atel	-ʃamiʃ-il	roll up	acaus.tel
ʃawuʃuk ʃawuʃul	intr	wind (around)	ce-ʃawuʃuk	a-ʃawuʃul	x			-ʃawuʃ-uk	wind (around)	mid.atel	-ʃawuʃ-ul	wind (around)	mid.tel
ʃankal	intr	crawl (of babies)	ce-ʃankal	a-ʃankal	x			x			-ʃankal	crawl	mid
ʃowaaʃ	tr	remove it	ce-ʃowaaʃ	a-ʃowaaʃ	x			-ʃowaaʃ-ək	move aside	mid.atel	-ʃowaaʃ-əl	move aside	mid.tel
rəba(y)ak	intr	lean	ce-rəbaak	a-rəbayak	-rəba(y)-ak	lean	mid/refl	x			x		
rəh	tr	close, support (of construction)	ce-rəh	a-rəh-i	x			-rəh-ək	be closed, supported	res	x		
rəŋ	tr	sow	ce-rəŋ	a-rəŋ	-rəŋ-ak	sow	ap	n.a.			x		
rəey	intr	be equal, resemble	n.p.	a-rəey	x			-rəʃ-ək	level, weigh, make equal	caus	x		
rii	tr	change it	ce-rii	a-rii	x			-ri-ik	change	acaus.atel	-ri-il	change	acaus.tel

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
riih/rih	tr	turn it	ce-riih	a-riih-i	-riih-ak	plait	ap	-rihi-ik	turn, spin	mid.atel	-rihi-il	turn	mid.tel
riñil	intr	be pensive	n.p.	a-riñil	x			x			riñil	be pensive	mid
rəbə-	no	join	ce-rəbə	a-rəbə-y-i	x			-rəbə-ək; -rəbə-y-ik	meet, come together; join (two ends)	mid.atel caus	-rəbə-əl	meet, come together	mid.tel
rəhən	tr	exchange it, swap it	ce-rəhən	a-rəhən-i	-rəhən-ak (+DO)	exchange smth.	rec	x			x		
rəkəw/ rəkəw	tr	pinch it with all fingers	ce-rəkəw	a-rəkəw-i	x			x			x		
rohok	intr	pick nose	ce-rohok	a-rohok	x			-rohok	pick nose	mid	x		
runo	intr	shape balls	ce-runo	a-runo	x			x			x		
ruuhuk	intr	hang around (negative connotation)	ce-ruuhuk	a-ruuhuk	x			-ruuhuk	hang around	mid	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root- (ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V/ CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
ruyuk/ ruyul	intr	die	n.p.	a-ruyuk/ a-ruyul	x			-ruy-uk	die	mid.atel	-ruy-ul	die	mid.tel
taan	tr	beat it, s.o.	cɛn-taan	an-taan	-taan-ak	beat each other	rec	-taan-ək	be beaten	res	x		
tapa-	no	crawl, move from one item to another	cɛn-tapaak	an-tapaal	x			-tapa-ak	crawl, move from one item to another	mid.atel	-tapa-al	crawl, move from one item to another	mid.tel
tapı	tr	smear it, infect	cɛn-tapı	an-tapı	x			-tap-ək	smear, infect	acaus.atel	-tap-əl	smear, infect	acaus.tel
taɾok	tr	clear field	cɛn-taɾok	an-taɾok	-taɾo-w-ak	clear field	ap	-taɾo-ək; -taɾok	be cleared; clear field	res; transitivity marking	x		
tawak	tr	exchange it, swap it	cɛn-tawak	an-tawak	-tawak +DO	exchange, swap	rec						
taan	intr	boil, run (idiom.)	cɛn-taan	an-taan	x			-taan-ik	boil it	caus	x		
təbər	tr	resolve it, deconstruct it, unplait it	cɛn-təbər	an-təbər-ı	x			-təbər-ək	unroll, take original shape	acaus.atel	-təbər-əl	unroll, take original shape	acaus.tel
təh	tr	skin it	cɛn-təh	an-təh	-təh-ak	skin	ap	-təh-ək	be skinned	res	x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root- (ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V/ CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
təl(ɫ)ək/ tələl	lab	finish, end	cən-təl-ək	an-təl-əl	x			-təl(ɫ)-ək	end; finish it	acaus.atel; transitivity marking	-təl-əl	end	acaus.tel
tən(tən)	tr	break it (of sticks), constructions, etc.)	cən-təntən	an-tən-ɪ	x			-tən(tən)-ək	break	acaus.atel	-tənɪ-ɪl	break	acaus.tel
tər	tr	solve it	cən-tər	an-tər-ɪ	x			-tər-ək	be solved	res	x		
təra-	tr-	crack it	cən-tərara-ak	an-təra-y-ɪ	-tərara-ak	crack (repeat., in several places)	atelicity marking	-tərara-ak	crack (in several places)	acaus.atel	-təra-y-ɪl	crack	acaus.tel
təwə(təw ə)	tr	clap (hands)	cən-təwətəwə	an-təwə-ɪ	-təwətəw-ak	clap hands	mid/refl	x			x		
təer	tr	take it(uncounta ble)	cən-təer	an-təer	-təer-ak	take from each other, share things	rec	x			x		
tətək	tr	chop it	cən-tətək	an-tətək	x			-tətə-w-ək	be chopped	res	x		
tımak	intr	wrestle	cən-tımak	an-tımak	-tımak	wrestle	rec	x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-V/ CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
təkow	tr	mix it	cən-təkow	an-təkow	x			-təkow-ək	be mixed	res	x		
təkom	tr	make it stiff	n.a.	n.a.	n.a.			n.a.			n.a.		
tən/ton	tr	return it	cən-tən	an-ton-ɪ	-təntən-ak (yamaa)	converse, speak in a dialogue	rec	-tən-ək/tun-ək	return	mid.atel	tən-əl	mid.tel	
təno/taan	tr	break it (e.g. of pots)	cən-taan	an-tən-ə	x			-taan-ək	break	acaus.atel	-tənə- əl/tənɪ-ɪl	break	acaus.tel
təw/ taak	intr	pass, follow	cən-taak	an-təw	-taak	pass, follow	mid/refl	x			x		
təwɔ̃	tr	pour it (small but solid things, e.g. dates)	cən-təwɔ̃	an-təwɔ̃	x			-təwɔ̃-ək	be poured	res	x		
tooh	tr	burst it	cən-tooh	an-tooh-a	x			-tooh-ik	burst	acaus.atel	-tooh-ɪl	burst	acaus.tel
tənak	intr	sing	cən-tənak	an-tənak	-tənak	sing	mid/refl	x			x		
tər	tr	make food	cən-tər	an-tər-ɪ	n.a.			n.a.			n.a.		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
tuɾuwak	intr	swim	cen-tuɾuwak	an-tuɾuwak	-tuɾuwak	swim	mid/refl	x			x		
toɾtoɾ/tuuɾ	tr	break it in pieces, crush it	cen-toɾtoɾ	an-tuuɾ-a	x			-tuuɾ-ik	crush	acaus.atel	-tuuɾ-il	crush	acaus.tel
tuwλ	intr	rest	cen-tuwλ	an-tuwλ	x			x			x		
ɬaa	tr	tell it, pick it up (many things)	cen-ɬaa	an-ɬaa	x			x			x		
ɬak(aa)	tr	throw it	cen-ɬak-aa	an-ɬak-aa	x			x			x		
ɬalmak	intr	move the tongue (of manner of speaking)	cen-ɬalmak	an-ɬalmak	-ɬalmak	move the tongue	mid/refl	x			x		
ɬana	tr	call s.o., adress s.o.	cen-ɬana	an-ɬana	-ɬana-ak	shout, call	mid/refl	-ɬanı-ik	be called	res	x		
ɬλlwλlwak	intr	stammer	cen-ɬλlwλlwak	an-ɬλlwλlwak	-ɬλlwλlwak	stammer	mid/refl	x			x		

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-Vl mid/acaus	Translation	Function
ṭəbənə/ ṭəbəyɪ	tr	step on smth.	cən-ṭəbənə	an-ṭəbə-y-ɪ	-ṭəba-y-ak/ ṭəbana-ak	step on smth. repeatedly	atelicity marking	x			x		
ṭədəh	tr	break it open (e.g. eggs)	cən-ṭədəh	an-ṭədəh	-ṭədəh-ak	hatch	mid/refl	x			x		
ṭələmɪ/ ṭəmamɪ	tr	improve it, repair it	cən-ṭələmɪ	an-ṭələmɪ	x			-ṭələmɪ-ɪk	improve (of behavior), get better (health); be repaired	mid; res	x		
ṭəmbələk	intr	slip, forget	n.p.	an-ṭəmbələk	-ṭəmbələk	slip, forget	mid/refl	x			x		
ṭələṭəl	intr	flow slowly	cən-ṭələṭəl	an-ṭələṭəl	x			x			-ṭələṭəl	flow slowly	mid
ṭyɪnk	intr	shiver	cən-ṭyɪnk	an-ṭyɪnk	x			-ṭyɪnk	shiver	mid	x		
ṭədɔ-	no	startle, surprise	cən-ṭədɔ-	an-ṭədɔ-	x			-ṭədɔ-ək; ṭədɔṭ-ək	startle, get surprised; startle, surprise	acaus.atel, caus	-ṭədɔ-əl	startle, get surprised	acaus.tel

Verbal base	Basic valency	gloss	ipfv/atelic	pfv/telic 3pfv-root-(ep)-(ht)	-ak ~-ak mid/refl/ rec/ap/atelicity	Translation	Function	-Vk CAUS/acaus/ mid/res	Translation	Function	-V/ mid/acaus	Translation	Function
ჰლ-	no	agree, come together	ცენ-ჰლ-	ან-ჰლ-	-ჰლი-y-ak	agree, come together	rec	-ჰლ-ო-კ; -ჰლი-ი-კ	agree, come together; make agree	mid.atel; caus	-ჰლ-ო-ლ	agree, come together	mid.tel
ჰლ-ო-კ	tr	damage it by treading, trample it	ცენ-ჰლ-ო-კ	ან-ჰლ-ო-კ	x			-ჰლი-ი-კ	be trampled	res	x		
ჰლ-ო	tr	take one of many, pick one by one	ცენ-ჰლ-ო	ან-ჰლ-ო-y-ი	-ჰლ-ო-y-ak	take onto oneself, for/with oneself	mid/refl	-ჰლ-ო-y-ი-კ	be taken	res	x		
ჰლ-ო-ლ	tr	clean it	ცენ-ჰლ-ო-ლ	ან-ჰლ-ო-ლ	-ჰლ-ო-ლ-ak	clean	ap	-ჰლ-ო-ლ-ე-კ	be cleaned	res	x		
ჰლ-ო-მ-ო-კ/ ჰლ-ო-მ-ო-ლ	intr	get atrophic	ცენ-ჰლ-ო-მ-ო-კ	ან-ჰლ-ო-მ-ო-ლ	x			-ჰლ-ო-მ-ო-კ	get atrophic	mid.atel	-ჰლ-ო-მ-ო-ლ	mid.tel	
ჰლ-ო-ნ-ჰ-ი-კ	tr	surprise s.o.	ცენ-ჰლ-ო-ნ-ჰ-ი-კ	ან-ჰლ-ო-ნ-ჰ-ი-კ	x			-ჰლ-ო-ნ-ჰ-ი-კ s.o.	surprise	caus	x		
ჰლ-ო-ვა	lab	drop (it), fall	ცენ-ჰლ-ო-ვა	ან-ჰლ-ო-ვა	-ჰლ-ო-ვ-ak	throw	ap	x			x		

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ṭuk	tr	lay it down	cen-ṭuk	an-ṭuk	-ṭuk-w-ak	lay eggs	ap	-tuk-uk	be layed	res	x		
ṭuun/ṭun	tr	plant it	cen-ṭuun	an-ṭun-i	x			-ṭuun-uk	germinate, sprout	acaus.atel	-ṭun-ul	germinate, sprout	acaus.tel
ṭuyλ	tr	open it	cen-ṭuyλ	an-ṭuyλ	x			-ṭuyλṭ-uk	open	acaus-atel	-ṭuyλṭ-ul	open	acaus.tel
ṭuyu	tr	drag it, pull it	cen-ṭyu	an-ṭuyu	-ṭuyut-ak	pull each other	rec	-ṭuyut-uk	be pulled	res	x		
ṭuyuk	tr	thesh	cen-ṭuyuk	an-ṭuyuk	-ṭuyu-w-ak	thresh	ap	-ṭuyuk	thresh	transitivity marking	x		
wλr	tr	lose it	cen-wλr	aṅ-wλr	-wλr-ak	get lost (lose oneself)	mid/refl	-wλr-ik	be lost, disappear	res or mid	x		
wodana	intr	cry	cen-wodana	aṅ-wodana	x			-wodani-ik	make s.o. cry	caus	x		
wona	intr	move	cen-wona	aṅ-wona	x			-woni-ik/won- ok	move it	caus	x		
wudλ	intr	burn	cen-wudλ	aṅ-wudλ	x			-wudλ-y-ik -wude-ek	burn it (tel./ atel.)	caus	x		
yaya	intr,	go (repeat.)	ce-yaya	a-yaya	x			x			x		
yoo	intr	dance	ce-yoo	a-yoo	x			x			x		