Argument Structure of Activity Verbs in Tigrinya

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Abstract

This study describes and examines the argument structure of activity verbs in Tigrinya, utilizing the role and reference grammar (RRG) framework. Specifically, the study analyses the semantic intricacies of activity verbs, focusing on their relationship with predicates and their arguments. The study also explores the formal representation of logical structures (LS) and predicate decomposition. Besides, the aspectual features of activity verbs, such as [+dynamic, -static], -punctual], and -telic], are examined alongside a set of operators like DO, BECOME, INGR, and SEML, which delineate the six verb types. Data collection methods include native intuitions, fieldwork with speakers from the central Tigray zone (Axum and Adwa districts), and secondary sources from Tigrinya linguistic resources. Fieldwork involved structured interviews to capture natural language usage nuances. It is attested that activity verbs in Tigrinya exhibit [+dynamic, -static], -punctual], and -telic] properties, implying events without inherent final points. The general logical structure of such events is represented as [DO' (x, [Pred' (x) or (x, y)])] and (X ACT ($_{manner}$) pred (x), where 'x' denotes agents, effectors, experiencers, and 'y' signifies themes, patients, or stimuli. The study also explores aspectual shifts observable through linguistic manipulations, such as adding or omitting demonstratives. For instance, the addition of the proximal demonstrative 'ʔɨz-' ('this') transforms activity events into accomplishments, while the distal demonstrative 'ʔit-' ('that') reverses this transformation. This research enhances our understanding of Tigrinya syntax and semantics by examining the structure and interpretation of activity verbs. The study reveals the intricate relationships between predicates and arguments, shedding light on the broader linguistic patterns of Tigrinya.

Keywords: [Activity, Tigrinya, Argument Structure, Logical Structure, Aspectual Shift]

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1. Introduction

This study examines the argument structure of activity verbs in Tigrinya (one of the sub-groups of the north Ethio-Semitic languages). The Ethio-Semitic languages are further divided into two sub-groups:- the north Ethiopian Semitic languages (Tigrinya, Tigre and Geez), and the south Ethiopian Semitic languages (Amharic, Harari, Argobba, and the Gurage languages) (Hetzron, 1972; Bender et al, 1976) in (Keffyalew, 2013:19).Tigrinya, part of the North Semitic sub-family, serves as the official language of Eritrea and is also the regional official language of the Tigray administrative region in Ethiopia.

According to Weninger et al. (2011:1153), Tigrinya ranks as the third most widely spoken Semitic language next to Arabic and Amharic. Currently, it serves as the official language of Eritrea and holds official language of the Tigray regional state of Ethiopia. This prominence highlights Tigrinya's significance in the linguistic and cultural landscape of both countries.

As the living Semitic language with the largest number of speakers after Arabic and Amharic, Tigrinya plays a significant role in Ethiopia and Eritrea (Lipinski, 1997; 84: Voigt, 2011:1153). Tigrinya speakers identify themselves as Tigraway (singular) and Tɨgrawot (plural), with the term "Tigrai-Tigriɲi" also used to refer to Tigrinya speakers in both Ethiopia and Eritrea (Girmay, 1991:50).

Based on the 2007 Central Statistical Agency of Ethiopia, Tigrinya has a population of 4,483,892. From the total population, urban inhabitants are 874,358 (19.5%) while rural inhabitants are 3,609,533 (80.5%) native speakers in the Region of Tigray. Tigrinya is characterized by its diverse usage in both urban (19.5%) and rural (80.5%) settings within the Tigray Region (Central Statistical Agency of Ethiopia, 2007).

In linguistic analysis, the study of argument structure is pivotal in understanding the structured representation of relationships among

arguments within sentences. This representation is intricately shaped by the thematic and aspectual properties of predicates, as mentioned by Grimshaw (1990:4).

Verbs are the main predicate terms in a language, and one of the most complex building blocks of both semantic representations and syntactic forms. The appropriate usage of verbs is guided by the knowledge of verb argument structure (the number and type) of the arguments that a verb takes.

Verbs denote all kinds of actions, processes or events; sometimes they can even express states. As stated by Levin (1993:1), the behavior of a verb, particularly with respect to the expression and interpretation of its arguments, is to a large extent determined by its meaning. The study of verbal argument structure has been of great concern to linguists because of the recognizable relations between the semantics of the verb and the patterns of syntactic realization of the arguments of the verb (Levin, 1993:1).

As indicated in Van Valin (2005:33), the aspectual classifications of verbs are made based on four temporal features of [± static], [± punctual], [± dynamic], and [± telic] that can be expressed by using a plus or minus signs as ±static, ±telic, ±durative or ±dynamic ±atelic ± instantaneous.

Through the lens of role and reference grammar (RRG), we aim to describe and examine the argument structure of activity verbs in Tigrinya, focusing on their semantic properties, thematic relations, and syntactic realization within sentences.

This analysis enhances our understanding of Tigrinya syntax and semantics by elucidating the intricate relationship between verb meanings and argument structures in the language.

2. Theoretical Framework

2.1 Argument structure overview

As designated in Du Bois (2003:16), the idea of argument structure has developed in modern linguistics, with a focus on efforts to understand both grammar and meaning. Du Bois also clarified argument structure as it typically indicates the number of arguments a lexical item takes (e.g. the core participants in the eventuality a verb denotes), their syntactic expression, and their semantic relation to this lexical item, and their hierarchy in a clause (Du Bois 2003:16).Moreover, Grimshaw (1990:4) also stated argument structure as a structured representation, which represents prominent relations among arguments that are jointly determined by the thematic properties of the predicate and by the aspectual properties of the predicate.

2.2 The Role and Reference Grammar (RRG)

Based on the role and reference grammar (RRG) framework, ''the relationship of verbs is described in terms of logical structures including thematic relations, semantic macro-roles, and syntactic functions which are reflected in the logical structures by predicates and a small set of operators such as DO, BECOME, INGR and SEML'' (Van Valin 2005:31). Thus, the specific objective of this study is to describe and examine the argument structure of activity verbs in Tigrinya, focusing on their semantic properties, thematic relations and syntactic realizations with in sentences.

According to Van Valin (1990:223) cited in (Boutin, 2010:25), in RRG, the relationship between a predicate and its arguments is expressed by logical structures that provide a formal semantic representation for each verb. The logical structures consist of predicates, their arguments, and a small set of operators (DO, BECOME, INGR and SEML). Supporting the above idea, Van Valin (2005:53) states that the logical structure is the lexical-semantic representation of the meaning of the verb and highlights the number of arguments the verb has. Besides, in RRG, the linking between the semantic and syntactic representations is in terms of logical structures of verbs,

semantic macro-roles, and the linking of macro-roles to syntactic core arguments (Van Valin, 2005:129).

Van Valin (2005:42) contends that in RRG, verbs are analyzed in terms of a lexical decomposition system in which state and activity classes are taken as basic classes on which all other classes are built from them. In RRG, semantic decomposition of predicates and their semantic argument structures are represented as logical structures, an analysis of clause structure and the use of a set of thematic roles organized into a hierarchy (Salem, 2015:222).

In the description of the argument structure of activity verbs in Tigrinya, the researcher used several key concepts of RRG. These concepts are the underlying logical structure (LS) and the predicate decomposition using the macro roles (agent and undergoer and the micro-roles (agent, patient, theme…) particularly useful for describing the interface between the semantics and syntax of predicators of verbs in particular and the clauses in general.

3. Research Methods

This study is purely qualitative in nature. To get reliable and adequate data, we utilized both primary and secondary sources of data. The primary sources of data were obtained from the researcher's own native intuitions (introspection) and the native speakers during fieldwork. The secondary data were collected from Tigrinya grammar books, dictionaries and from both published and unpublished research works.

The researcher's personal judgment drawn from his grammatical competence, and linguistic background in Tigrinya, makes him well-equipped to assess the grammaticality of the Tigrinya sentences used in this study. Supporting this assertion, Greenbaum (1984:193) noted that linguists who are native speakers of the language under investigation can supplement their corpus data by drawing on their own knowledge of the language.

Despite the researcher being a member of this linguistic community, researcher also took sample native speakers of Tigrinya from the central zone of Tigray (Axum and Adwa) districts. To minimize the effect of dialect variation in the data, the researcher used purposive sampling technique to select central zone of Tigray other than other dialects. The reason why the central zone of Tigray is that this variety is relatively close to the standard (i.e. the language we get in almost all printed materials, including books, magazines, newspapers, official documents, and the language of communication for broadcasting or Medias.

To collect data from the representative native speakers, the researcher prepared interview questions and a guided checklist to formulate the general principles that underlie the sentences the researcher produces and performs grammatical tasks on a list of verbs provided in the fieldwork. Besides, there were also a number of elicitation exercises or the elicited sample clauses with the aim of obtaining native speakers' evaluation tests on acceptability judgments of the argument structure realization.

To ensure a comprehensive approach and meet the research objectives, secondary data sources including both published and unpublished Tigrinya grammar textbooks were utilized. The researcher reviewed these materials and extracted relevant grammatical content and clauses through purposive sampling. Afterward, native speakers from the sample area were asked to evaluate the intelligibility and acceptability of various sentence structures in Tigrinya.

The collected data were presented and transcribed both phonetically and phonemically using International Phonetic Alphabet (IPA) and translated by the researcher.

The morpheme-by-morpheme interlinear glossing and translation follow the Leipzig glossing rules, which include the data line, morphological line, and free translation into English. Besides, the researcher incorporates two extra lines based on the role and reference grammar (RRG) theory: the logical structure line and the predicate decomposition line.

Phonemic Inventory of Tigrinya

Table 1 Consonant inventory of Tigrinya adapted from Tesfay (2002:25)   [1]

		Bilabial	Labio Dental	Alveo lar	Palata l	Velar Plain	Velar labialized	uvular plain	uvular labialized	Pharyn geal	glottal
Stops	Vs	P		t		k	kʷ				ʔ
	Vd	b		d		g	gʷ				
	Ej	p'		t'		k'	k'ʷ				
Fricative	Vs		f	s	ʃ			χ	χʷ	ħ	h
	Vd		v	z	ʒ					ʕ	
	Ej			s'				χ'	χ'ʷ		
Affricate	Vs				tʃ						
	Vd				dʒ						
	Ej				tʃˤ						
Nasals		m	[ɱ]	n	ɲ	[ŋ]	[ŋʷ]				
Trill				r							
Lateral				1							
Approximants		w			j						

Table 2 Tigrinya vowel inventory

	Front	Central	back
High	i	ɨ	u
Mid	e	ə	o
Low		a	

4. Data Analysis and Discussion

4.1 Argument Structure of Activity Verbs

According Levin and Rappaport Hovav (1998:108), the argument structure of activity verbs is formulated in the form of predicate decomposition representations of argument structure as [X DO] or [X ACT$_{manner}$]. The structural part of the meaning of the verb is represented by the primitive predicate ACT and the variable X. Variables are arguments of primitive predicates and represent the arguments of the verb.

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As indicated by Smith (1997:45), ''activity verbs are characterized as processes that are limitless (unbounded) in principle and have an indefinitely successive number of interval stages.'' Supporting the idea of Smith, Van Valin (2005:33) states that activity verbs have the internal aspectual properties of becoming [+dynamic, -static], -punctual], and -telic]. [3]

Verbs that express the manner of motion such as *nət'ər-* 'bounce', *bərər-* 'fly' and *ħankəb-*'climb' involves processes which are unlimited in principle. These types of verbs are characterized as processes that are limitless (unbounded) in principle and have an indefinitely successive number of interval stages. Let us see examples below in (1).

(1) *ʔit-a   ʕif   bərir-a*
   DET-3FSG bird fly.PFV-3FSG
   'The bird flew.'
   bərira<*ʕif*><agent>
   LS = ACT[(*ʕif*, (bərira))]]

The verb *bərira* 'it flew' indicates repetitive or continuous actions that do not express the culmination or endpoint of the participant *ʕif 'bird'*. In this case, the LSCs do not refer to any end points of the arguments. It only shows processes of moving in temporal space but there is no information about the endpoint or goal of the participant rather it gives information about who performs the action. The semantics of activities exclude the goal of the motions. The verb encapsulates the manner of acting of the agent argument, represented by a lexical-semantic structure that can be decomposed as [x ACT <MANNER >] [i.e. x ACT < *bərər>*].

The researcher can realize that in Tigrinya, manner of motion verbs does not indicate a bounded telic situation where a terminal point is established, nor do they provide any information about the end result. Thus, in all cases, these

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[3]The data are presented using International Phonetic Alphabet (IPA) which is appended as table1 and table 2 in this study. In the data presentation and analysis, the researcher use the angled brackets '<>' to indicate sub set relationship between arguments and enclose argument hierarchy.

verbs have an argument structure that can be decomposed as [x DO <event>] or [x ACT <MANNER>], expressing an activity event.

In Tigrinya, there are also verbs that indicate walking of the agent such as *hawtət-* 'meander' *zawən-* 'roam' and *zəwər-* 'hike' express activity event. These verbs indicate the movement of the subject without the goal and endpoint. These verbs do not indicate the culmination and bounded event both at lexical level (without the attachment of the prepositional phrases) and at clause level (with the attachment of the prepositional phrases).

For example, when we take the verb *zawənə* 'he/it roamed', it expresses the repeated movement of the actor/effector argument without indication of endpoint and culmination, and has the argument structure decomposition of [x DO<*zawən-*>].

To examine the argument structure of these verbs at clause level, let us see below in (2).

(2) *Ɂɨz-a   səbəjti Ɂab   kətəma zəwir-a*
     DEM-3FSG woman PRE (on) town hike.PFV-3FSG.SM
   'The woman hiked on the town.'
    zəwira<səbəjti, kətəma><actor/effector, location>
    LS=DO [(səbəjtiBE (kətəma [zəwira)]]

In (2), the intransitive verb *zəwira* 'she hiked' has two arguments *səbəjti* 'the woman' that has the role of performing the action of hiking on *kətəma* 'town' that has the role of location without an explicit goal or termination in sight. This type of verb emphasizes the *durativity* and *dynamicity* of the action, highlighting the continuous nature of the movement rather than its conclusion.

In the above data even the additions of prepositional phrase *Ɂab kətəma* 'in town' do not designate the endpoint and termination of the actor. It only shows the actor performs the action repetitively without suggesting a destination. Such verbs capture the essence of movement in time and space

while intentionally omitting the endpoint, allowing the focus to remain on the actor's experience rather than the outcome of their action. In this, the LSCs do not refer to any end points of the argument. It only shows processes of moving in temporal space but there is no information about the endpoint or goal of the participant rather it gives information about who performs the action (only the durativity and dynamicity of the situation).Since the predicate do not show any final temporal points, the semantics of the activities excludes the goals of the motions.

We can deduce from the above construction that unlike manner of motion verbs, which express an accomplishment interpretation when they include the prepositional phrases, the verbs in (2) express the activity event even with the addition of prepositional phrases. We can also conclude that the walking verbs like the above are inherently activity verbs in Tigrinya and the logical structure for the state of affairs become DO (x) pred (x) where x is an actor/effector.

There are also verbs that indicate the repeated action of the agent without specifying a fixed endpoint in the language under study. These verbs express activity events. Below, we present some representative examples in (3).

(3)	Root	Stem	Gloss	Verb	Gloss
a.	k^w-l-l	k^wələl-	'wheel'	k^wələl-ə	'he wheeled'
b.	w-z-w-z	wəzwəz-	'rick'	wəzwəz-ə	'he ricked'
c.	t'-m-t'-m	t'əmt'əm-	'coil'	t'əmt'əm-ə	'he coiled'

The verbs in (3) represent unbounded and non-culminated events, indicating the repeated motion of the actor/agent. The verbs do not specify an inherent direction as part of their meaning. For instance, the verb *t'əmt'əmə* 'he coiled something' in (3c) illustrates the repeated movement of an entity in an undefined direction and without a defined endpoint. This suggests that these verbs express activity events, with the logical structure of the situation represented as DO (x) pred (x, y), where x is the agent and y is the patient. To further clarify the argument structure decomposition, we can examine the

constructions and examples presented in (4). These constructions will help to illustrate how the components interact and contribute the overall meaning.

(4) *ʔɨt-i   təχli   bɨ-nɨfas   tə-wəzawiz-u*
   DET-3MSG tree   ACC-wind PASS-tremble.PFV-3MSG.OM
   'The tree was trembled by the wind.'
   təwəzawizu <təχli, nifas > <theme, actor/natural force>
   LS = ACT ([nɨfas, təχli) [(təwəzawizu (təχli))]

As indicated in (4), the verb *təwəzawəzə* 'become trembled' also indicate unbounded repeated action and has two arguments in which the subject *təχɨli* 'tree' which is the theme and the object *nɨfas* 'wind' which is the actor/natural force. These verbs indicate the iterative/repeated action that did not function as endpoint rather as a direction or path indicator. We can conclude that these verbs do not indicate the culminated entity on their own, and they are categorized under activity verbs/events and the logical structure for the state of affairs become ACT (x) pred (x, y) where x is the actor and y is the theme.

Verbs of throwing such as *dərbəj-* 'chuck', *səndəw-* 'hurl' and *wərwər-* 'toss' are inherently transitive and express the activity event without the attachment of definite prepositions. All the above verbs express activity events, as there is no information about the goal and the endpoint. These verbs have only the information about the two arguments-the agents (performer of the action) and the theme (the movable entity). For instance, when we take the verb *səndəwu* 'they hurled' it has two default arguments (agent and theme). Since these verbs did not specify an inherent end point as part of their meaning, they are treated as an activity event. For a further indication of the argument structure decomposition, see the sentences given in (5) below.

(5) *ʔɨt-i   sɨbʔ-aj   santim wərwir-u*
   DET-3MSG man-SGV coin   toss.PFV-3MSG.SM
   'The man tossed the coin.'
   wərwiru <sɨbʔaj, santim><agent, theme>
   LS =DO [(sɨbʔaj, wərwiru (santim [((təwərwiru(santim)))]]

The verb *wərwiru* 'he tossed' in (5) has two arguments *sɨbʔaj* 'man' who has the role of an agent and *santim* 'coin' which has the role of a theme. In this context, this verb does not imply the presence of a goal or an endpoint of the theme in their lexical semantics and at clause level. Hence, these verbs express the activity event without the addition of a prepositional phrase or locative noun phrase like *nabti k'alaj* 'into the lake', *nabti səkiʕet* 'into the net' etc. We can infer from the above data that in the language under study, verbs of throwing require only two obligatory arguments (agent and theme), and express activity verbs/events. For these verbs the internal aspectual property becomes [- static] [- punctual] and [- telic] and the logical structure for the state of affairs become DO (x [pred (x, y)]) where x= agent y= theme.

However, when we add prepositional phrases/goal phrases such as (*nab t'ərəp'eza* 'to table', *nab səkiʕet* 'to net', and *nab laħmi* 'to cow' to the verbs of throwing such as *dərbəj-* 'chuck', *səndəw-*'hurl' and *wərwər-* 'toss' they change their aspectual category (from activity events into accomplishment events) and they express a telic culminated event (accomplishment event) as is demonstrated in (6) below.

(6) *ʔɨt-i   sɨbʔaj   santim nab-ʔɨt-i   t'ərəp'eza wərwir-u*
   DET-3MSG man-SGV coin   PRE (to)-DET-3MSG table   toss.PFV-3MSG.SM
  'The man tossed the coin to the table.'
   wərwiru <*sɨbʔaj*, sɑntim, t'ərəp'ezɑ> <agent, theme, location>
   LS=DO [(sɨbʔaj, sɑntim) wərwiru [BECOME (təwərwiru (sɑntim (t'ərəp'ezɑ)))]]

Even though the verb *wərwiru* 'he tossed' in (6) is the same with the verb in (5), the addition of the prepositional phrases such as *nab t'ərəp'eza* 'to table' as is indicated in (6) change the aspectual category from activity event into accomplishment event. In this, there is an addition of one argument, which has the role of location. In such cases, agent, theme, and goal/location are the arguments of the accomplishment event and the internal aspectual property becomes [- static] [-punctual] and [+ telic]. For instance, in (6), the event/verb *wərwiru* 'he tossed' has three arguments; the subject *sɨbʔaj* 'man' who has the semantic role of agent, the indirect object *santim* 'coin' which has the

semantic role of theme and the direct object *t'ərəp'eza* 'table' which has the location/goal semantic role.

In this context, the LSCs refer to process of an action leading to the end result involving the arguments. Each case provides information about the endpoint or goal of both the participant and the performer of the action, indicating both the durativity and telicity of the situation. We can deduce that verbs of throwing can express dynamic telic events when combined with prepositions that denote a fixed goal.

The logical structure for the state of affairs changes from DO pred (x, y) to DO pred (x, y) BECOME pred at (z),where x represents the agent, y the theme, and z the location/goal. Comparing (5) and (6), their logical structures are: DO [(sɨbʔaj, [wərwiru (santim)]]vsDO [(sɨbʔaj, santim) wərwiru [BECOME (təwərwiru (santim BE-IN(t'ərəp'eza)))]]. The logical structure for these scenarios transitions from DO pred (x, y) to DO pred (x, y) BECOME pred at (z),

Verbs that indicate repetitive action of the agent with obligatory instruments also express activity event. These verbs express only the activity of the agent without the culmination of the action. See examples of these verbs in (7) below.

(7)	Root	Stem	Gloss	Verb	Gloss
a.	*w-l-w-l*	*wəlwəl-*	'polish'	*welwil-a*	'she polished'
b.	*ħ-χ-χ*	*ħaχəχ-*	'scratch'	*ħaχiχ-a*	'she scratched'
c.	*s'-r-g*	*s'ərəg-*	'sweep'	*s'ərig-a*	'she swept'

It is scrutinized that the verbs in (7) include three potential semantic arguments (agent, patient, and instrument). For example, the verb *s'əriga* 'she swept' in (7c) has three expected arguments; the agent who performs the action, the patient that the action which is performed on, and the instrument by which the action is done). Since there is no specification about the endpoint and culmination, the verb expresses an activity verb/event and the internal aspectual property becomes [- static] [- punctual] and [- telic].

Besides, the logical structure for the state of affairs become DO (x [pred (x) or (x, y)]). For further clarification and indication of the argument structure decomposition, see the sentence given in (8).

(8) *ʔɨt-i*   *təmħaraj bɨ-c'ərk'I   c'ama wəlwil-u*
     DET-3MSG student   PRE.INST-fabric shoe   polish- PFV-3MSG.SM
   'The student polished the shoe with a fabric.'
   wəlwilu <təmħaraj, *c'ama*,*c'ərk'i><*agent, patient, instrument>
   LS= DO [(*təmħaraj*, *wəlwilu*, ((*c'ama*(təwəlwilu)))]]

Obviously, the verbs in (8) need an instrument argument to perform the action. Besides, the sentence constructions have three syntactic arguments (subject, direct object, and indirect object), and three semantic arguments (agent, patient, and instrument) respectively. For instance, in (8), the verb *wəlwilu* 'he polished' comprises three arguments; the subject *təmharaj* 'student' has an agent role, the direct object *c'ama* 'shoe' has a patient role and the indirect object *c'ərk'i* 'fabric' has an instrument role. The semantic arguments do not indicate the culmination and endpoint and the verb expresses the activity event.

In this, the LSCs refer to the repetitive action of the agent without thinking about the end result or point. Here, there is only information about who performs the action. We can deduce that in the language under study, verbs that indicate repetitive action of the agent with obligatory instruments express activity event. The logical structure for the state of affairs become DO (x [pred (x, y)]) where x= agent y= patient.

Moreover, verbs that indicate the dispatching of an entity from a specified place such as (*səgʷəgʷ* 'expatriate' *t'ərrəz*- 'deport' *sədəd*- 'dispatch') express activity event in Tigrinya. In these verbs, there are two mandatory syntactic arguments (subject and object) and two mandatory semantic arguments (agent/causer, and theme/patient). Besides, there can be one additional argument that has either source or path semantic role. For example, when we take the expression *səgʷəgʷə* 'he expatriated' it has two default arguments; the agent and theme/patient. It can also add one source argument

optionally. Since these verbs did not indicate the goal or endpoint/result, they express the activity event. To understand the argument structure decomposition of dispatching verbs in Tigrinya, let us also observe example in (9).

(9) ʔit-i   səbʔaj səraħtəjna-tat kab   gəziʔ-u   səgʷig-u
   DET-3MSG   man   worker-PL   PRE (from) home-3MSG.POSS
expatriate.PFV-3MSG.SM

  'The man expatriated workers from his home.'
  səgʷigʷu <səbʔaj, səraħtəjnatat, gəza><agent, theme, source>
  LS=DO [(səbʔaj, səraħtəjnatat [gəza (təsəgʷigʷom (səraħtəjnatat))]]

In the above data, the subjects or agents initiate the action on the direct object or the theme. For instance, in (9), the verb *səgʷigʷu* 'he expatriated' has three arguments; the subject səbʔaj, 'man' who has the agent semantic role, the indirect object səraħtəjnatat 'workers' who has the patient/theme semantic role and the direct object *gəza* 'house' which has the semantic role of source. One can conclude that verbs of dispatching express the non-culminated event and are good candidates for activity events in Tigrinya. By focusing on their transitive nature and the relationships between the agent and theme (or patient), you capture the essential dynamics of these verbs. The inclusion of a potential third argument, such as path or source, adds depth to the understanding of the action without necessitating a specific endpoint. This aligns well with the notion that the emphasis is on the action itself rather than its culmination.

In this, the LSCs for the state of affairs refer to the dispatching of the patient from some source because of the action from the agent without thinking about the endpoint or result. The logical structure for the state of affairs become DO (x [pred or (x, y)]) where x is agent and y is theme/patient), emphasizing the ongoing nature of the action. This framework effectively illustrates how the verbs function in context, providing a clear model for understanding their syntactic and semantic properties.

In the language under study, there are also self-agentive movement verbs that indicate the body posture of entities. These verbs express activity event in their imperfective aspect. These verbs can express activity events that the agent repeatedly acts the process without terminal result. In Tigrinya, such type of verbs expressed by using the progressive tense marker jɨ- to the base verb and adding the existential marker copula *ʔall-* 'exist'. These verbs use the form (person marker (*jɨ/tɨ)* plus the verb stem and/or plus a copular verb (*ʔall-*). For instance, the expressions such as *jɨgəmmɨʕ ʔallo* 'he becomes swing', *jɨnk'ɨt'k''ət'ʔallo* 'he becomes quivering, and *jɨwɨzwəzʔallo* 'he becomes trembling' have only one overt argument (agent) directly without any addition of the direct object**.** When we see the progressive expression *jɨnk'ɨt'k'ət' ʔallo* 'he is quivering', it prompts one agent argument with no indication of the endpoint and culmination. The logical structure for state of affairs become DO (x [pred or (x)]) where x= agent/theme. Here, the role of participants may differ depending on the intentionality of the argument that if the argument intentionally done the action, role becomes agent and if the action is done without intention, it is treated as a theme.

In Tigrinya, there is no any single verb that indicates the body posture of participants. But with the addition of the progressive marker morpheme and existential copula, it indicates the body posture and the semantic meaning. The meaning of the verb changes in to 'getting into a posture', and express an activity event. This illustrates how languages have distinct mechanisms to convey nuanced ideas, including actions and states of being.

The sentence below in (10) supports the data and indicates the argument structure predicate decomposition.

(10) *ʔɨt-i   sɨbʔ-aj   jɨ-gəmmɨʕ   nəjr-u*
    DET-3MSG   man-SGV   3MSG-swing.IMPF   exist.PFV-3MSG.SM
  'The man was swing.'
  jɨgəmmɨʕ <sɨbʔɑj> <agent>
  LS=DO [(sɨbʔɑj, BE [(gəmmɨʕ))]]

In (10), it is viewed that the subject *sibʔaj* 'man' is performing the action on a certain ideal position. From the event structure perspective, these body posture verbs involve the aspectual operator DO in their logical structure. We can conclude that self-agentive movement verbs are intransitive and express activity event in their imperfective aspect. But the perfective aspect expresses the stative event.

There are also classes of transitive activity verbs such as *ħajəχ* 'chew', *mətər-* 'carve' and *faħfəħ-* 'rub' inherently atelic in nature. These verbs indicate iterative action of the agent on the patient without indicating the final end point of the process. These verbs have at least two arguments one agent and the other patient. In these verbs, even though the patient is not specified, the verbs inherently invite a patient argument. For instance, when we see the verb *ħajəχə* 'he chewed', two arguments are expected (agent and patient). The verbs indicate a repetitive action of the agent on the patient. To realize the argument structure predicate decomposition of such verbs, see also the sentence constructions in (11).

(11) *molla ni-ʔit-i   t'ərəpeza   faħfiħ-u-wwo*
    Molla ACC-DET-3MSG table   rub.PFV-3MSG.SM-3MSG.OM
    'Molla rubbed to the table.'
    faħfiħuwo <molla, t'ərəpeza> <agent, patient>
    LS= DO [(molla, t'ərəpeza[(t'ərəpeza (təfaħfiħu)))]]

These verbs are always atelic because they do not appear to have the end result or a process that leads to a terminal point. For instance, the verb *faħfiħu* 'he rubbed' in (11) has two arguments; the subject *molla* 'Molla' who has the semantic role of agent and the object *t'ərəpeza* 'table' which has the semantic role of patient. These verbs express the activity event because they indicate repetitive actions that do not indicate an endpoint. We can deduce that in this, the logical structure for the state of affairs refers to the activity of the agent without thinking about the endpoint or result. The logical structure for the state of affairs become DO (x [pred (x, y)]) where x= agent y= patient.

Verb pattern that has an inherent reciprocal meaning also indicate the activity event. These verbs are atelic and not punctual in the very nature and express an activity event. Let us see illustrative examples shown in (12).

(12)	Root	Stem	Gloss	Verb	Gloss
a.	*b-ʔ-s*	*tə-bəʔas-*	'fight'	*tə-bəʔas-u*	'they fought each other'
b.	*χ-r-k-r*	*tə-χaraχər-*	'argue'	*tə-χaraχər-u*	'they argued each other'
c.	*m-gʷ-t*	*tə-magʷət-*	'contend'	*tə-magʷət-u*	'they contended each other'

The verbs in (12) need plural subjects, which have inherent reciprocal meaning. Since these verbs are not telic and punctual in their very nature, they express activity events. For example, in (12a), the verb *təbəʔasu* 'they fought each other' has two arguments that have the same semantic role with no culmination (agent/patient).

See also the argument structure of these verbs in (13).

(13) a. *wəttadər-at   tə-taqʷs-om*
     troop-PL   RECP-fight.PFV-3MPL.SM
   'Troops fought each other.'
    təwagiʔom <wəttadərat, s'əlaʔti><agent/patient, patient/agent>
    LS=DO [(wəttadərat, s'əlaʔti ([təwagiʔom (wəttadərat)∧(s'əlaʔti)))]]

   b. *ʔit-om   təmhar-o-n   məmhɨr-n   tə-χaraχir-om*
      DET-3MPL   student-PL-CNJ   teacher-CNJ   PASS-argue.PFV-3MPL.SM
    'The students and teacher argued each other.'
     təχaraχirom <təmharo, məmhɨr> <agent/patient, patient/agent>
     LS =DO [təmharo, məmhɨr[təχaraχirom(təmharo) ∧ (məmhɨr)))]]

The verbs in (13) are atelic because they have inherent reciprocal meaning in their construction. For instance, in (13a), the verb *təwagiʔom* 'they fought each other' has two arguments; the subject *wəttaddərat* 'troops' has the role of both agent and patient, and the other subject *təχ'awəmti* 'rebels' has also

the role of patient and agent. In (13b), the verb *təmʷagitom* 'they argued each other' has two arguments; the subject *təmharo* 'students' have the role of agent or patient, and the other subject *məmhɨr* 'teacher' has also the role of agent/patient. Conceptually, the two participants have the same semantic role and the action designates endless process i.e. atelic and there is a stage or process that opposes the punctuality. The logical structure for the state of affairs become DO (x [pred (x) or (x, y)]) and DO (y [pred (y) or (y, x)]) where x= agent/patient y= agent/patient.

Verbs that express the removal of an entity from the source such as *ʔaləj-* 'eliminate' *wəggəd-* 'abolish' and *bok'k'əs-* 'remove' also express the activity event. These verbs indicate the removal of something from some source. Since these verbs do not indicate the final endpoint of the patient/theme, they only convey the activity event and include three arguments in which an agent who has the potential of initiating action, the theme which undergoes the action, and the source (a place from which the theme is removed).

In all the above removal verbs, the agent initiates the theme that undergoes the action from a location. For instance, when we take the verb *ʔaləj-* 'eliminate', it has two default arguments- the agent who initiates the theme to remove and the theme who undergoes the action because of the agent. These verbs of removing express activity verbs/events because of the endpoint. Let us also see the argument structure decomposition of such verbs in (14) below.

(14) *ħarəstaj   s'ahjaj   bək'k'ʷis-u*
    farmer   weed   remove.PFV-3MSG.SM
    'Farmer removes weeds.'
    bək'k'ʷisu<ħarəstaj, s'ahjaj><agent, patient/theme>
    LS=DO[(ħarəstaj[bok'k'isu(təbək'k'ʷisu(s'ahjaj))]]

According the above data, an event of the agent acts on the patient/theme that takes it away from the source or ground'. For instance, the verb *bok'k'isu* 'he removed' has two arguments in which the subject *ħarəstaj* 'farmer' who has

an agent, and the object *s'aħjaj* 'weed' which is a patient/theme role. In such type of verbs, there are two arguments (the agent and patient/theme) that the patient/theme refers to an entity or an inalienable part of something which is removed. The logical structure for the state of affairs become DO (x [pred (x, y)]) where x= agent y= patient/theme.

Moreover, there are some verbs refer to a separation of two entities in which one is part of the other express an activity event in Tigrinya. The removed part is normally thought to be an unfavorable or useless part of the whole. These verbs also express an activity event in the language under study as indicated in (15) below.

(15)	Root	Stem	Gloss	Verb	Gloss
a.	*k'-r-f*	*k'ərəf-*	'peel'	*k'ərəf-ət*	'she peeled'
b.	*l-ħ-s'*	*ləħas'-*	'bark'	*ləħas'-ət*	'she barked'
c.	*s'-r-b*	*s'ərəb-*	'shave'	*s'ərəb-ət*	'she shaved'

The above verbs (15a-c) indicate that the agent is acting on the theme and taking it away from the entity. These verbs usually have two obligatory arguments (the agent and the patient/theme). For example, the stem verb *k'ərəf-* 'peel' in (15a) has two expected arguments-the agent (the one performing the action) and the patient (the entity undergoing the action). Since, the action does not indicate the culminated event; it is classified as an activity event and the logical structure for the state of affairs effectively captures this relationship DO (x [pred (x, y)]), where **x** represents the agent, **y** represents the patient, pred **(x, y)** denotes the action performed by x on y.

Besides, the verbs that indicate accompaniment of an entity are inherently atelic and express the activity events. The data in (16) are illustrative examples of accompaniment verbs that indicate activity event.

(16)	Root	Stem	Gloss	Verb	Gloss
a.	*m-r-ħ*	*mərəħ-*	'guide'	*mərəħ-ə*	'he guided'
b.	*ʕ-dʒ-b*	*ʕadʒəb-*	'escort'	*ʕadʒəb-ə*	'he escorted'
c.	*s-ʕ-b*	*səʕab-*	'ensue'	*səʕab-ə*	'he ensued'

These verbs (16a-c) indicate that both the agent and the undergoer carry out the same action of moving from one location to another together because the agent voluntarily goes with the undergoer/theme. For example, when we take the verb *mərɨħə* 'he guided' in (16a), it has two arguments (the agent and the theme). Even though both arguments voluntarily did the action, the privileged syntactic argument is given for the powerful or initiator of the action-the agent. Since, there is no indication of fixed final point of the participants; the expression indicates the activity event. The logical structure for the state of affairs become DO (x [pred (x, y)]), where x= agent y= theme.

Let us also see the sentence constructions and logical decomposition of such verbs below in (17).

(17) *taddəsə   nɨ-təsfaj   mərɨħ-u-wwo*
       Tadese   ACC-tesfɑy   guide.PFV-3MSG.SM-3MSG.OM
    'Taddese guided for Tesfay.'
     mərɨħuwwo <taddəsə, təsfɑj> <agent, theme>
     LS=DO [(taddəsə, mərɨħu ∧ (təmərɨħu (təsfɑj)))]

In (17), the verb *mərɨħuwwo* 'he guided him' has two arguments; the subject *taddəsə* who has the role of agent and the object *təsfaj* who has the role of the theme. Here, the privileged syntactic argument is given for the powerful or initiator of the action (agent) and it has thematic role hierarchy of <agent, theme>. Since, there is no hint of culmination of the action and fixed final point of the participants, the construction expresses the activity event and the logical structure for the state of affairs become DO (x [pred(x, y)]), where x represents the agent, **y** represents the theme. We can conclude that in Tigrinya, verbs of accompaniment express action of moving an argument from one location with the help of other argument without indicating the goal express activity event.

It is attested in Tigrinya that sound emission verbs such as *gʷazəm-* 'rumble' *ħarnəχ-* 'snore' *fas'əj-* 'howl' express activity events in which the sound emitter repeatedly acts the action without a fixed endpoint. The above verbs are intransitive and have only one or single sound-emitter argument which

has the logical structure of [X ACT <MANNER>] [pred ′(x)]). For instance, the sound emission verb *ħarnəχə* 'he snored' has one sound-emitter argument i.e. self agentive argument. The sound-emitter repeatedly acts the action without indicating the endpoint. In all the verbs, the temporal property become +dynamic, +durative, -telic and the logical structure for the state of affairs become [XACT<MANNER>], or DO(x, [pred′ (x)]), where x is effector/emitter. Since these sound emission verbs are intransitive, they have only one argument that has the sound emitter. We can conclude from the detail Tigrinya, it is attested that sound emission verbs indicate endless action of the agent without expecting a result or temporal endpoint and have only one argument that has sound-emitter role.

Moreover, it is also attested that verbs of substance emission can express activity event in Tigrinya. The data in (18) below are examples of substance emission verbs that express an activity predicate in the language.

(18)	Root	Stem	Gloss	Verb	Gloss
a.	*ħ-r-ʔ*	*ħarəʔ-*	'defecate'	*ħarəʔ-a*	'they(F) defecated'
b.	*t-f-ʔ*	*təfiʔ-*	'vomit'	*təfiʔ-a*	'they (F) vomited'
c.	*ʃ-j-n*	*ʃəjn-*	'urinate'	*ʃəjən-a*	'they(F) urinated'

The substance emission verbs in (18) are transitive that has at least two arguments-the external argument that has an effector semantic role and the internal argument which has a theme semantic role. For instance, when we take the verb *ħarəʔa* 'they defecated' in (18a), it expresses two arguments; the external substance emitter argument and the internal substance emitted argument. In all the verbs, the temporal property become +dynamic, +durative, -telic and the logical structure for the state of affairs become DO′ (x, [pred (x, y)]), where x is effector/emitter and y is theme/emitted. We can conclude that the above emission verbs in Tigrinya express continuous action of the emitter and express the activity event.

Verbs that indicate static motion express the activity predicates. These verbs do not indicate an endpoint or terminate point. The data in (19) are an example of such verbs.

(19)	Root	Stem	Gloss	Verb	Gloss
a.	*t-ʃ-k-r-k-r*	*tə-ʃkərkər-*	'whirl'	*tə-ʃkərkər-ə*	'it becomes whirled'
b	*t-n-k-t'-k'-t'*	*tə-nkət'k'ət'-*	'shiver'	*tə-nkət'k'ət'-ə*	'it becomes shivered'
c.	*t-w-z-w-z*	*tə-wəzawəz-*	'oscillate'	*tə-wəzawəz-ə*	'it becomes oscillated'

These verbs express movement in a static motion. In Tigrinya, these verbs are passive like that only one theme argument is clearly observed and the agent argument is hidden. For instance, in (19a), the verb *təʃkərkərə* 'it becomes whirled' expresses the movement of an entity in a static position. It consists of only one theme argument and they have the logical structure of DO′ (x, [pred (x)]) where x= theme.

Verbs that indicate the resting of the agents can also express activity event in their imperfective aspect. These verbs describe a mode of motion without indicating the culmination or specification the action. Here, we add the progressive tense marker *ji-*and the progressive auxiliary verb or a copula *ʔall-* 'exist'. Let us consider sample examples in *(*20).

(20)	Root	Stem	Gloss	Verb	Gloss
a.	*χ'-m-t'*	*χ'immət'-*	'sit'	*ji-χ'immət'ʔallo*	'heis sitting'
b	*g-d-m*	*gaddəm-*	'lie'	*ji-gaddəmʔallo*	'heis laying'
c.	*b-r-k-χ*	*bərkəχ-*	'kneel'	*ji-birkəχʔallo*	'heis kneeling'

The above verbs express the act of resting an entity. Only one obligatory argument (the agent) is expected. The argument that is capable of resting maintains on the subject position. These verbs express activity verbs/events because they do not indicate the telic/culminated event. For instance, the verb *ji-χ'immət' ʔallo* 'he is sitting' in (20a) showed that, the stance/existence of an entity that portrays the motion of resting as agent. Here, there is no additional arguments indicated that express the specification of the goal of the agent.The temporal property of such verbs become +dynamic, +durative, -telic and the logical structure for the state of affairs become DO′ (x, [pred (x)]) where x= agent. We conclude that the progressive maker *ji-* in Tigrinya indicates a reference to require and analyze the event into stages and

describes an action in progress. These verbs have situations that have arbitrary endpoints and action in progress.

4.2 Activity verbs and aspectual shift

Shifting between events is a natural cross-linguistic phenomenon, as noted by Pustejovsky (1995) and Smith (1997).

In Tigrinya, the deletion or the addition of directional prepositional phrases shifts from accomplishment event to activity event and vice versa. For example, if we add the directional prepositional phrase '*nab ʕɨdaga* 'to the market' to manner of motion verbs, they change their aspectual property to a telic accomplishment event. Let us see and compare the examples below in (21).

(21) a. *nəs'anət   kəjd-a*
        Netsanet   go.PFV-3FSG.SM
       'Netsanet went.'
        kəjdɑ *<nəs'anət>* <agent>
        LS=DO [(*nəs'anət*, kəjdɑ (*nəs'anət*)))]

   b. *nəs'anət   nab   ʕɨdaga   kəjda*
       Netsanet PRE (to) market go.PFV-3FSG.SM
      'Netsanet went to the market'
       kəjdɑ *<nəs'anət, ʕɨdaga>*<agent, goal>
       LS=DO [(*nəs'anət*, kəjdɑ[BECOME(kəjdɑ)(*ʕɨdaga*))]

As can be seen in (21), the addition and deletion of the directional prepositional/goal phrase shift the aspectual property of the events. In (21a), the clause *nəs'anət kəjda* 'Netsanet went' prompts the movement of the agent without reaching the final endpoint and so it expresses the activity event. In thiscase, there is only one argument *nəs'anət* who is in the action of going to the non-defined place and the logical structure for the state of affairs become DO [(*x)* pred, (x) where x = agent.

In (21b), the clause *nəs'anət nab ʕidaga kəjda* 'Netsanet went to the market' adds the goal phrase *nab ʕidaga* 'to the market' and it expresses an accomplishment event of going to a defined place -ʕidaga 'market'. The logical structure for the state of affairs become DO [(*x)* BECOME pred, (x) the researcher can conclude that the addition of directional prepositional/goal phrase changes an activity event to accomplishment event and the removal of directional prepositional/goal phrase changes accomplishment event to accomplishment event.

In Tigrinya, it is also indicated that the deletion of durative adverbials such as *ni-ʕasərtə səʕat*, *ni-ħadə dəχ'iχ'a* e.t.c) indeed shifts an activity event to an accomplishment event. Let as compare the sentences (22a and 22 b) below.

(22) a. wəldɑj   ni-ħadə səʕat   məkina s'əgin-u
      Welday   PRE (for)-one hour car   repaire.PFV-3MSG.SM
    'Welday repaired the car for an hour.'
    s'əginu<wəldɑj, məkinɑ><agent, patient>
    LS =DO [(wəldɑj, [təs'əginɑ (məkinɑ))]]

  b. *wəldɑj   məkina   s'əgin-u*
    Welday   car   repaire.PFV-3MSG.SM
   'Welday repaired car.'
    s'əginu<wəldɑj, məkinɑ><agent, patient>
    LS=DO [(wəldɑj, məkinɑ BECOME[təs'əginɑ (məkinɑ))]]

As can be seen in (22), the removal of durative adverbials adds the telicity of the event and addition of durative adverbials cancelled the telicity. For instance, in (22a), the verb *s'əginu* 'he repaired' expresses an activity event which has two arguments; the subject *wəldɑj* who has the role of agent and the object *məkina* 'car' which has the role of patient. The same expression *s'əginu* 'he repaired' in (22b), has also two arguments; the subject *wəldɑj* who has the role of agent and the object *məkina* 'car' which has the role of patient. Because of the addition of durative adverbial *ni-ħadə səʕat* 'for one hour', the verb in (22a) expresses activity event but when we omit the durative adverbials as is in (22b), it shifts to the accomplishment event.

The researcher further concludes that removing these adverbials eliminates the emphasis on duration and continuous action, potentially resulting in a clearer endpoint for the action and classifying it as an accomplishment event. This shift demonstrates how the inclusion or omission of specific adverbials can shape the aspectual interpretation of a verb.

In Tigrinya, it is also observed that activity events shift to accomplishment events with the addition of telic directional prepositions such as *nab* 'to/towards', *mis* 'with' e.t.c. specify the source and goal of the agents as indicated in (23) below.

These prepositions indicate the starting and ending points of the path, thereby marking the action as an accomplishment event. Conversely, when atelic directional prepositions are added, accomplishment verbs shift to activity events. This is demonstrated in the sentence constructions and illustrations in (23a) and (23b) below.

(23) a. *gəbrəmədhin   bɨ-s'irgɨja   g^wəjɨj-u*
     Gebremedhin   PRE (through)-road   run.PFV-3MSG.SM
   'Gebremedhin ran through road.'
   g^wəjɨju <gəbrəmədhin, s'irgɨja><agent, path>
   LS =DO [(gəbrəmədhin, [g^wəjɨju (s'irgɨja)))]]

  b. *gəbrəmədhin nab   k'alaj   g^wəjɨj-u*
    Gebremedhin PRE (in to) lake   run.PVF-3MSG.SM
   'Gebremedhin ran in to lake.'
   g^wəjɨju<gəbrəmədhin, k'alaj><agent, goal>
   LS= [(gəbrəmədhin, k'alaj) [BECOME (g^wəjɨju(k'alaj))]]

When we compare the above constructions, the verbs *g^wəjɨju* 'he ran' in (23a) and in (23b), in (23a), it is modified by the atelic directional preposition phrase of *bɨ-s'irgɨja* 'through the road' the only information it has is about the action of the figure (agent) and the path. The verb has two arguments; the subject *gəbrəmədhin* who has the agent semantic role and the object *s'irgɨja* 'road' which has a path semantic role.Since, there is no specific direction of

motion implied and no information about the endpoint, it expresses the activity event.

In (23b), the verb *gʷəjɨju* 'he ran' it is modified by the telic directional preposition phrase of *nabk'alaj* 'into the lake' and specify the source and goal of the agents. The verb has two arguments; the subject *gəbrəmədhin*, who has the semantic role of agent and object *k'alaj* 'lake' who has a semantic role of a goal.

Since the motion follows a fixed, specific direction and includes information about the endpoint or goal, it qualifies as an accomplishment event. This suggests that telic directional prepositions can transform an activity event into an accomplishment event, while atelic directional prepositions can shift an accomplishment event into an activity event.

The addition of distal demonstratives such as *ʔiti* 'that', *niʔitom* 'to those', *niʔiti* 'to that', *niʔizom* 'to these', and existential quantifiers such as *bɨzuħ* 'many', *χ'urɨb* 'some' have the potential to shift accomplishment event to an activity event as in (24c) below. On the contrary, the addition of near demonstratives such as *niʔizi* 'to this', *ʔizi* 'this', and quantity specifiers like *ħadə* 'one', *kɨltə* 'two' *sələstə* 'three' etc. have the potential to shift activity event to the accomplishment event as in (24a) below. Let us see representative examples.

(24) a. *ʔalmaz ni-ʔɨz-i   bəgiʕ   tɨ-wəχ'iʕ-o   ʔall-a*

    Almaz   ACC-DEM-3MSG sheep   3FSG.SM-hit.IMPF-3MSG.OM exist.-3FSG.SM

    'Almaz is hitting to this sheep.'

    tɨwəχ'iʕo <ʔalmaz, bəgiʕ><agent, patient>

    LS=DO [(ʔalmaz, wəχ'iʕato) [BECOME (təwəχiʕu(bəgiʕ)))]]

  b. *ʔalmaz   kɨltə ʕasa   bəliʕ-a*

    Almaz   two   fish   eat.PFV-3FSG.SM

    'Almaz ate two fish.'   (kɨltə 'two' quantity specifier

    bəliʕa <ʔalmaz, ʕasa> <agent, patient>

    LS= DO [(ʔalmaz, bəliʕa) [BECOME (təbəliʕu(ʕasa)))]]

c. *ʔalmaz   nɨ-ʔɨt-i*   bəgiʕ   *wəχ'iʕ-a*
   Almaz   ACC-DEM-3MSG   sheep   hit.PFV-3FSG.SM
 'Almaz hit sheep.'
  wəχ'iʕɑ<ʔalmɑz, bəgiʕ><agent, patient>
  LS= DO [(ʔalmɑz, [wəχ'iʕɑ (bəgiʕ))]]

In (24a) the verb *tɨwəχ'iʕo* 'she is hitting' describe the activity of the subject *ʔalmaz* and the undergoer of the effected/patient *bəgiʕ* 'sheep'. The subject *ʔalmaz* has the role of agent and *bəgiʕ* 'sheep' has the role of patient. Without the addition of near demonstrative, the verb *wəχ'iʕa* 'she hit' expresses simply an activity event. However, when combined with the near addition of near demonstratives such as niʔizi 'to this' as in (24a), the expression indicates an accomplishment event.

In (24b), the verb *bəliʕa* 'she ate' describe the activity of the subject *ʔalmaz* 'Almaz' and the undergoer of the effected *ʕasa* 'fish'. Therefore, *ʔalmaz* 'Almaz' has the role of agent and the *ʕasa* 'fish' has the role of the patient. The expression *bəliʕa* 'she ate' is simply an activity verb, but with the addition of quantity specifier *kɨltə* 'two' as in (24b), the expression indicates accomplishment event i.e. a telic event that unfolds over time, and whose inherent endpoint is determined by the quantity specifier of *ʕasa* 'fish' consumed.

On the contrary, in (24c), the verb *wəχ'iʕa* 'she hit' describe the activity of the subject *ʔalmaz* who has the role of the agent, and the undergoes *bəgiʕ* 'sheep' which has the role of patient. Since the verb *wəχ'iʕa* 'she hit' does not indicate a fixed patient/a telic event, it expresses an activity event.

In sentences (24a and b), it is observed that the verbs describe an accomplishment event i.e. a telic event that /unfolds over time, and whose inherent endpoint is determined by the object specificity and quantity specifier of *ʕasa* 'fish' consumed respectively. Even though all the sentences (a, b, c) have the same number and role of the participants, their logical structure is different. In the case of (24a and b), the number, the role of participants, and have logical structure operators of DO and BECOME. In

contrast, (24c) lacks the BECOME operator, indicating that the sentence describes an action without an inherent endpoint or a change of state, focusing solely on the action of doing (the DO operator). This distinction highlights how the logical structure can significantly affect the interpretation of the sentences, even when they share the same participants and actions.

It is examined that, in Tigrinya, the addition of quantity specifiers (*ħadə, kilta.*) can express both activity event and accomplishment event. When we use the quantity specifiers with the prepositions *ʔab* 'on' and *bi-* 'by', the activity predicate shifts to accomplishment predicate. However, when we change with the preposition *ni-* 'for' it changes to activity predicate. For further clarification, let us see the examples below in (25).

(25) a. ʔan-ə   ʔit-i   məs'iħaf niħadə   səʕat   ʔanbib-ə-jj-o
        PRO-1SG DET-3MSG book   PRE (for) one hour   read.PFV-1SG.SM-EP-3SG.OM
        'I read the book for one hour.'
         ʔanbibəjjo <ʔanə, məs'iħaf> <agent, theme>
         LS =DO [(ʔanə, ʔanbibəjjo, (məs'iħaf (tənəbibu)))]]

     b. ʔan-ə   ʔit-i   məs'iħaf ʔab   ħadə   səʕat   ʔanbib-ə-jj-o
        PRO-1SGDET-3MSG book   PRE (in) one   hour   read.PFV-1SG.SM- EP-3SG.OM
        'I read the book in one hour.'
         ʔanbibəjjo<ʔanə, məs'iħaf><agent,,theme>
         LS =DO [(ʔanə, məs'iħaf[BECOME (məs'iħaf (tənəbibu)))]]

     c. ʔan-ə   ʔit-i   məs'iħaf bi-ħadə   səʕat   ʔanbib-ə-jj-o
        PRO-1SG DET-3MSG book   PRE (by)-one hour read.PFV-1SG.SM- EP-3SG.OM
        'I read the book by one hour.'
         ʔanbibəjjo <ʔanə, məs'iħaf> <agent, theme>
         LS =DO [(ʔanə, ʔanbibəjjo[BECOME (ʔanə, məs'iħaf (tənəbibu)))]]

In (25a), the sentence *ʔanə ʔiti məs'iħaf niħadə səʕat ʔanbibəjjo* 'I read the book for an hour' expresses the non-culmination of reading the book and expresses an activity event. However, if we change the preposition with *ʔab* 'in' and bi- (by) as is in (8b and c), it becomes *ʔanə ʔiti məs'iħaf ʔab/biħadə*

səʕat ʔanbibəjjo 'I read the book in/by one hour' expresses the telic event in which the reader read the whole book in one hour. The verb *ʔanbibə* 'I read' in (25a), (25b), and (8c) has two syntactic and semantic arguments that the subject *ʔanə* 'I' has the role of the agent, and the object *məs'ɨħaf* 'book' has the role of the theme/patient. However, two of the expressions have different interpretations because of the difference in prepositions. In example (25a), the verb shows activity event whereas in (25b and c) they show the accomplishment events because of the conceptual or semantic difference of the prepositions *nɨ-* 'for', *ʔab* 'in', and bi- 'by' in the language. The logical structure for the state of affairs become DO (x) pred (x, y) and DO′ (x, [BECOME [pred (x, y)]) x= agent y= theme respectively.

Moreover, it is also attested in the language that shifts from activity event to stative event. The posture verbs can indicate both activity and stative event. When the verbs use the form (*jɨ/tɨ*+verb stem+ copular verb), the verb express activity event, but when the subject marker prefix and the copular verb are deleted and used as past, it expresses the stative event. Expressions such as *jɨ-bəlliʕ ʔallo* 'he is standing', *jɨ-səggɨdnəjru* 'he was bowing', *jɨ-ggadəmu ʔalləwu* 'they are lying down' and *jɨntʼɨltʼəl ʔallo* 'he is hanging express activity situation**.** However**,** the **e**xpressions *təχʼəmitʼu* 'he sat' and *təlʕilu* 'he stood up' express the stative event.

4.3 Activity verbs and Agentivity

Agentive verbs are characterized by the potential for an agent to control the action, or for the action to be performed with the agent's intentionality (Levin, 2009). In this context, the agent represents the most typical semantic role of a subject within a proposition. An agentive participant is generally an animate being that exerts control over the event indicated by the verb. Similarly, an agentive verb denotes an action that can be controlled by an animate being.

Manner of motion verbs such as *gʷəjəj* 'run', *zələl-* 'jump' and *nətʼər-* 'bounce' indicate the manner of acting of the subject are agentive verbs in the language under discussion. For these verbs, the agent manages and intentionally/volitionally done the action. For instance, when we take the verb *zələlə* 'he jumped', it has one default agent argument, which indicates the

active involvement of the agent that requires some intentionality. The logical structure for the state of affairs become [X ACT <MANNER>], where x is an agent.

In all the above verbs, the subject intentionally manages the action of the predicate and therefore they are grouped under the agentive activity verb/event. The role of the subject is categorized under proto-agent and the thematic role is the agent in each case. The same is also applied for the rest of the verbs. In contrary to the manner of motion verbs, verbs of rolling such as *tənsafəfə* 'floated' *tənʃaratətə* 'slide' and *tənəxanəxʼə* 'become shake', do not indicate the controllability of the subject and are therefore classified as non-agentive activity verbs. These verbs convey actions that occur without the agent exerting direct control over the outcome.

Let us see sample argument structure construction in (26).

(26) *ʔit-i   wərəxʼət   tənsafif-u*
     DET-3MSG   paper   float.PFV-3MSG.SM
     'The paper becomes floated.'
     tənsɑfəfə<wərəxʼət><theme>
     LS =BE [(wərəxʼət [(tənsɑfəfə wərəxʼət)))]]

In the above argument structure construction, the subject has the semantic role of theme which clarifies that the subject does not have the potential to control the action. For example, the verb *tənsafəfə* 'become floated' in (26) express an entity or argument that is floated does not have the volitionally and potential for controlling the action (non-agentive). The subject of the verb does not initiate the action rather it is involved by external argument (natural force).The subjects of these verbs are grouped into the proto-patient (undergoer) of the action and the thematic role is the theme in which the subject did not have the potential to control the action that is non-agentive. The logical structure of a state of affairs follows the form BE [(X) pred (x)], where *x* represents the theme.

Sound emission verbs can be both agentive/self-agentive and non-agentive based on the intentionality of the emitter. For instance, the verb *fasʼəjə* 'he howled' indicate the intentionality of the emitter and express agentive. In contrast, the emission verb *ħarnəχə* 'he snored' indicate the non-intentionality of the sound emitter and so classified as non-agentive. The logical structure for the state of affairs become DO(x), [pred′ (x)]) and [X ACT <MANNER>] where x= agent respectively.

Moreover, like sound emission verbs, substance emission verbs can be both agentive/self-agentive and non-agentive based on the intentionality of the emitter. Verbs such as *ħarəʔə* 'defecated' and *ʃəjnə* 'urinated' usually indicates the sense of intentionality of the agent on the action and becomes agentive whereas verbs such as r*əhasʼə 'sweated' and təfiʔə* 'vomited' indicate the non-controllability of the action and are non-agentive. The logical structure for the state of affairs become DO(x), [pred′ (x)]) and [X ACT <MANNER>] where x= actor respectively.

In the language under discussion, there are also action verbs such as *fənsʼəħ* 'split' *fəncʼəl* 'splinter' and *cʼəfləχ'* 'crush' *t*hat express the volitionality and controllability of the agent over the action that the agent directly involves on the action (agentive). The above verbs are good candidates of agentive activity verbs that the agent directly affects the patient. For instance, when we take the event *fənsʼəħ* 'he caused to split' it has at least two arguments the causer/agent and the patient. since the subject referent has control over the action, it treated as agentive and logical structure for the state of affairs become DO (x), [pred′ (x, y)]), where x is an agent and y is a patient.

5. Conclusions

This study has described and examined the argument structure of activity verbs in Tigrinya. It contributes to the discussion by focusing on concepts from Role and Reference Grammar (RRG), such as logical structure and predicate decomposition areas that have not been addressed in prior research. As a result, this study could assist other researchers interested in linguistic typology and semantic analysis, particularly in the context of other Semitic

languages. Given that argument structure is recognized as a promising framework for the accurate classification of verbs, this research may also support scholars exploring natural language processing in Tigrinya and related languages, especially those whose syntax and semantic interfaces have yet to receive adequate attention.

In the discussion, it is attested that verbs which express the manner of motion such as *nətʼər-* 'bounce', *dəjjəb-* 'climb' *bərər-* 'fly'; roll type verbs such as *tʼəmzəz-* 'twirl', *wəzwəz* 'rick' and *tʼəmtʼəm-* 'coil'; verbs of throwing such as *dərbəj-* 'chuck', *səndəw-* 'hurl' and *-wərwər-* 'toss'; verbs of dispatching such as *səgʷəgʷ* 'expatriate', *tʼərrəz-* 'deport', *sədəd-* 'dispatch', and follow type motion verbs such as *səʕab-* 'ensue', *mərħ-* 'lead' and *sənəj-* 'accompany'express activity events unless we add the explicit directional phrases. But, when we add explicit directional phrase, such as *nab gəza* 'to home' *niʔamərika* 'to America' that indicate the goal argument, the verbs express accomplishment.

In Tigrinya, certain verb patterns inherently convey reciprocal meanings, such as *təkərakər* 'argue', *təgʷajiχ* 'disputed', and *təmagot* 'contended', which express activity events. These verbs signify culminated or defined actions of the agent. In addition, verbs that indicate the accompaniment of an entity, such as *mərəħ-* 'guide, *ʕadʒəb* 'escort', and *ʔafanəw* 'accompany', also express activity events, enriching the language's ability to depict dynamic interactions.

In Tigrinya, verbs of posture can express activity event /situation in the imperfective aspect. These verbs can express activity situations by adding the progressive tense marker ji-and by adding the progressive auxiliary verb or a copula *ʔall-* 'exist'. For instance, the expressions *jigəmmiʕ ʔallo* 'he becomes swing', *jink'it'k'ət' ʔallo* 'he becomes quivering, and *jiwizwəz ʔallo* 'he becomes trembling' express activity event because the meaning of the verb changes in to 'getting into a posture'.

The way demonstratives and quantity specifiers influence the aspectual interpretation of verbs highlights the nuanced nature of aspectual distinctions

in Tigrinya. It has been scrutinized that the shift from one aspect to the other is practically observed by adding or deleting proximal or distal demonstratives. The addition of the proximal demonstrative (*ʔɨz-* 'this') has the potential to change activity event to accomplishment event, but the addition of the distal demonstrative (*ʔɨt-*'that') has the potential to change accomplishment event to activity event.

Moreover, it is examined that, the presence of quantity specifiers with certain prepositions can indeed influence the aspectual interpretation of predicates in Tigrinya. When we add the prepositions *ʔab* 'on' and *bɨ-* 'by' in conjunction with quantity specifiers, the event shifts the activity predicate to the accomplishment predicate. Conversely, when we add the preposition nɨ- 'for' seems to maintain the event as an ongoing activity, which can imply a lack of a specific endpoint, and changes to an activity predicate.

Generally speaking, the logical structure for the state of affairs for activity situation has [DO' (x, [Pred' (x) or (x, y)])], where DO' is the logical operator of the type, Pred' represents any activity verb, and 'x' can be agent, effector or experiencer, and 'y' can be a theme, patient or stimulus.

In the language under discussion, body posture verbs can express both activity and stative event. These verbs can express activity situations by using the progressive tense marker ji-and by adding the progressive auxiliary verb or a copula *ʔall-* 'exist'. These verbs can be agentive and non-agentive depending on the controllability and intentionality of participants. For example, when we compare the two activity expressions *jɨgəmmiʕ ʔallo* 'he is swinging' and *jɨnk'ɨt'k'ət' ʔallo* 'he is quivering', the first expression indicates the durativity, dynamicity and intentionality of the argument (agentive) but the second expression indicate only durativity and dynamicity of the argument (non-agentive).

In Tigrinya, there are activity motion verbs, which are naturally agentive and non-agentive. The roll type manner of motion verbs such as *tɨnsɨfɨf* 'float' and *nɨt'ɨr* 'bounce' are intrinsically non-agentive but motion verbs such as *nət'ərə* 'hop' and *bərərə* 'fly' are agentive verbs in their very nature.

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In the language under discussion, there are also action verbs such as *fəns'əħ* 'split' *fənc'əl* 'splinter' and *c'əfləχ'* 'crush' *t*hat express the intentionality and controllability of the agent over the action that the agent directly involves on the action (they are agentive). since the subject referent has control over the action, it treated as agentive and logical structure for the state of affairs become DO (x), [pred′ (x, y)]) where x= agent y= patient.

Abbreviations

1	first-person	MPL	masculine plural
2	second-person	FPL	feminine plural
3	third-person	MSG	masculine singular
ACT	Active	NP	noun phrase
ARG	Argument	NPs	noun phrases
CNJ	Conjunction	O	Object
COM	Comitative	OM	object marker
COMP	Complimentizer	PASS	Passive
COP	Copula	PFV	Perfective
DCA	direct core argument	PL	Plural
EP	Epenthesis	POSS	Possessive
F	Feminine	PP	prepositional phrase
FPL	feminine plural	PPs	prepositional phrases
FSG	feminine singular	PRO	Pronoun
FU	Future	PROG	Progressive
		PRE	Preposition
PSA	privileged syntactic	SG	Singular
PST	past tense	1SG	first-person singular
RRG	role and reference	1FSG	first-person feminine singular
IMPF	Imperfective	1FPL	first-person feminine plural
INGR	Ingressive	1MSG	first-person masculine singular
INST	Instrumental	1MPL	first-person masculine plural
IPA	international phonetic	3PL	third-person plural
LS	logical structure	SM	subject marker
MPL	masculine plural	3FSG	third-person feminine singular
MSG	masculine singular	3FPL	third-person feminine plural

Symbols

ʌ	And then	DO	activity predicate
<>	enclose arguments their roles	Ø	unspecified activity
[()]	to enclose the logical structure of	i.e.	That means

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