

# Kisa Argument Structure in Valency Theory

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## ABSTRACT

Language is used to talk about the world, typically structured in sentences that consist of a topic (subject) and a comment (predicate). The main verb, as the head of the predicate, is the most important part of a sentence as it determines the presence of role players in the sentence as its arguments. Different verbs require various numbers and types of arguments with specific thematic roles. Each verb in a sentence, therefore, assigns thematic roles to its arguments and this forms the argument structure of a language as a language universal property. Kisa, a Bantu language spoken in Western Kenya, has an argument structure that is unique to itself because each language has its own specific way of presenting and realising language universal properties. However, the argument structure of Kisa has not been described and documented. Using a descriptive analytic research design, adopting the valency theory and basing on data collected from two native speakers and verified by the author as a native speaker of Kisa, this paper describes the argument structure of Kisa and shows that Kisa verbs allow up to 3 arguments in a sentence assigned specific thematic roles such as agent, patient, and experiencer. The morphology-syntax-semantic inter-phase is shown to be at play, in Kisa, where prefixes participate in the determination of the argument structure of verbs and assignment of thematic roles. These findings contribute to a deeper understanding of Kisa's linguistic structure and its implications for valency theory in Bantu languages.

**Keywords** - Argument structure; Bantu languages; Kisa; Morphosyntax; Prefixes; Thematic roles; Valency.

## INTRODUCTION

Language is used to describe the world. This is done through sentences, which consist of a topic and a comment. In a sentence, the topic, though not always, corresponds to the subject (typically a noun phrase), while the comment corresponds to the predicate (typically a verb phrase). The verb, as the head of the verb phrase, is the most important part of a sentence because it is the one that determines the presence of any other element in the sentence. Each situation or state of affairs in a sentence as envisaged in the verb implies the involvement of role players. The role players involved in any given situation or state of affairs in a sentence as determined by the main verb are the arguments of that verb (Goldberg, 1995). Different verbs require different numbers and different types of role players (Nordquist, 2023; Anderson, Bronwyn, Derek, Julianne, Margaret, Nathan & Ai, 2022; Luraghi & Roma, 2021; Levin & Malka, 2005). Role players in a sentence are typically noun phrase referents which syntactically can be subjects, objects or complements (Nordquist, 2023; Anderson, Bronwyn, Derek, Julianne, Margaret, Nathan & Ai, 2022; Luraghi & Roma, 2021; Levin & Malka, 2005). Each role player has a specific role to play in the situation, or state of affairs described in the sentence. The part played by a particular entity (role player/argument) in a situation or state of affairs is its thematic role. Each verb in a sentence, therefore, assigns some thematic role to its arguments. Therefore, in any natural language, the situation or state of affairs described by the main verb in a sentence, together with its arguments and the thematic roles they play forms the argument structure in that language (Nordquist, 2023; Anderson, Bronwyn, Derek, Julianne, Margaret, Nathan & Ai, 2022; Luraghi & Roma, 2021; Levin & Malka, 2005).

Kisa, as a natural language, has its argument structure as a language universal property. The argument structure of Kisa is unique because each language has its own specific way of presenting and realizing language universal properties. Understanding these universal principles allows us to examine how Kisa exemplifies

them uniquely. Nonetheless, the argument structure of Kisa, though unique, has not been formally described and documented. In the quest to describe and document the uniqueness of Kisa argument structure, this paper, in the tenets of valency theory, describes the valency of main verbs in Kisa alongside their thematic role assignment structure. Thematic roles, such as agent (who performs the action) and patient (who receives the action), help clarify how arguments relate to the verbs in Kisa as in other languages. The paper aims to unearth the language specific characteristics of this language universal property to help inform and add to the body of knowledge regarding this aspect of language. The paper seeks to answer four research questions: What types of valency do main verbs in Kisa have? What number and type of arguments occur with different types of valency in Kisa? What thematic roles do Kisa main verbs assign their arguments? Does the morphology of main verbs determine argument structure in Kisa?

The paper begins by giving highlights about the language under study followed by a summary of the segmental inventory and orthographic representation of Kisa. A review of relevant literature and a discussion of the theoretical framework adopted in the study is then given followed by a description of the methodology employed in the study. After that a detailed discussion of the valency and argument structure in Kisa is provided. The paper then ends with a conclusion. This research not only aims to document the distinctive features of Kisa’s argument structure but also contributes to our broader understanding of linguistic theory and diversity.

### The Language

Kisa<sup>1</sup> is a dialect of Luhya<sup>2</sup> language spoken in Western Kenya. It has approximately 89,000 speakers (1999 population census<sup>3</sup>). Luhya belongs to the Bantoid genus of the Benue-Congo sub family of the Niger-Congo language family (Haspelmath, Dryer, & Comrie, 2008). There are at least 19 dialects of Luhya in Kenya (Ondondo, 2013; Marlo, 2007). The *Ethnologue* classification in Figure 1 identifies 20 dialects, while the map in Figure 2 shows 18. Kisa, while part of the larger Luhya group, exhibits unique phonological and grammatical features that distinguish it from its sister dialects. To better understand the phonetic characteristics of Kisa, we turn to its segmental inventory and orthographic representation in the next section.

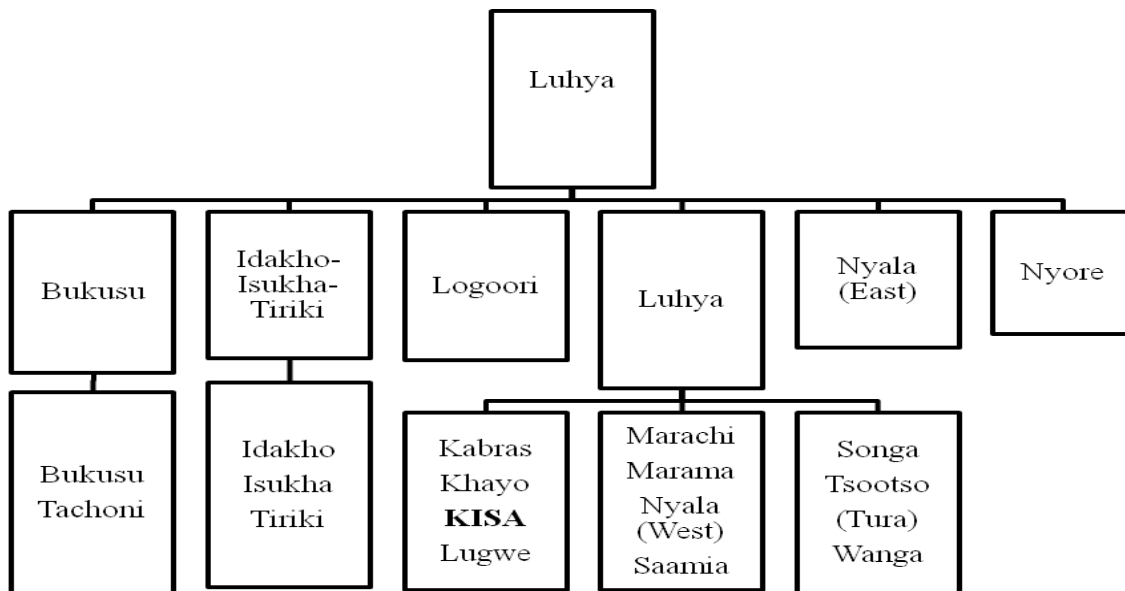


Figure 1. Ethnologue classification of the Luhya dialects.

Figure 1 illustrates the Ethnologue classification of Luhya dialects, highlighting the diversity within the language family.

<sup>1</sup> There are alternative names, Olushisa, Shisa, and Olukisa.

<sup>2</sup> There are alternative names, Luyia and Oluluhya.

<sup>3</sup> The 2009 census figures do not report population figures by ethnic group, so more current figures are not available.

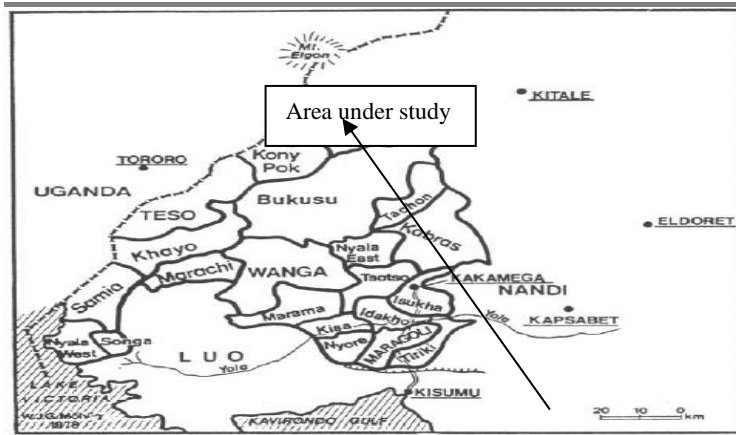


Figure 2. Luhya dialect map.<sup>4</sup>

Figure 2 provides a geographical representation of these dialects, emphasizing the spread of Luhya languages in Western Kenya."

### Kisa Segmental Inventory and Orthography

The International Phonetic Alphabet (IPA) representation of the Kisa consonantal inventory (Ondondo, 2013) is presented in Table 1.

Table 1: Kisa consonantal Inventory—IPA

	Bilabial	Labio-dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Stops	p		t			k	
Affricates			ts	tʃ			
Fricatives	β	f	s	ʃ		x	h
Nasals	m		n	ɲ		ŋ	
Trill			r				
Lateral			l				
Glides	w				j		

Table 2 presents the practical orthography representation of the Kisa consonantal inventory (Ondondo, 2013).

Table 2: Kisa Consonantal Inventory—Practical Orthography

	Bilabial	Labio-dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Stops	p		t			k	
Affricates			ts	ch			
Fricatives	b	f	s	sh		kh	h
Nasals	m		n	ny		ng'	
Nasal-stop	mb		nd			ng	
Nasal-affricate			nz	ɲj			

<sup>4</sup> Adapted from Marlo (2007, p. 3).

Trill			r				
Lateral			l				
Glides	w				y		

Note. Kisa has a classic five vowel system /a, e, i, o, u/. that complements the consonantal inventory, contributing to the phonetic richness of Kisa.

## LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Traditional grammar classifies verbs according to the number of arguments they select (Fillmore, 1968; Jackendoff, 1972). Traditional grammar refers to arguments with the grammatical function that they have in a sentence such as subject, object, indirect object. According to traditional grammar, intransitive verbs take one argument, typically the subject. Transitive verbs take two arguments: the subject and the direct object. Ditransitive verbs require three arguments: the subject, the direct object, and the indirect object. For instance, in the sentence 'The cat sleeps,' the verb 'sleeps' is intransitive and requires only the subject 'the cat'. In contrast, 'She gave him a book' is a ditransitive construction involving the subject 'she', the direct object 'a book', and the indirect object 'him'. This kind of classification, however, does not account for the semantic properties of verbs, that is the thematic roles that these arguments play in the sentence. Neither does it account for other syntactic properties of verbs in relation to their arguments, for instance the valency of main verbs in sentences. Recognizing these limitations, this paper adopts a valency theory framework to explore the unique argument structure of Kisa.

The main part of every sentence in a language is the main verb. The main verb is associated with a core set of semantic participants that take part in the event. (Lieber, 2009), with the aim of completing the meaning of the verb. An argument in linguistic analysis is an expression that is necessary or required in order to complete the meaning of a content verb in a sentence. Arguments of the verb, which according to Baker (1997) are assigned both grammatical and thematic roles are related to main verbs through a discrete set of thematic roles (Levin, 2017; 2018; Levin & Rappaport, 2005). Main verbs in sentences and their arguments form the verb-argument structure in a language. Therefore, the argument structure of a verb in a sentence is determined by specifying the number and types of arguments that the verb requires to be well-formed as well as defining the thematic role that each argument plays in a given sentence as assigned by the verb (Payne 1997; Baker 1997; Trask, 1993; Cook 1988). Understanding the nuances of verb argument structure is crucial for analysing the unique characteristics of Kisa, particularly in how its verbs assign thematic roles to arguments.

### Valency Theory

Main verbs in a sentence have a valency that determines the number and type of arguments that can or must appear in their environment. This is accounted for in the valency theory, which explores the nature of main verbs and their arguments. Most main verbs take one, two or three arguments. As such, the number of arguments in a predicate goes from zero to three, and rarely four (Nordquist, 2023; Anderson, Bronwyn, Derek, Julianne, Margaret, Nathan & Ai, 2022; Luraghi & Roma, 2021; Levin & Malka, 2005).

In linguistic analysis, valency is the number and type of arguments controlled by a given content verb. Valency counts all arguments including the subject, the object and the complement. In the grammatical theory of valency, the verbs organize sentences by binding specific necessary elements such as the subject, the object and the complement (Luraghi & Roma, 2021; Goldberg, 1995; Allerton, 1982). Four major types of valency have been identified including: impersonal (avalent), that does not have a determinate subject; intransitive (monovalent), that takes one argument- the subject; transitive (divalent), that takes two arguments- the subject and the direct object; ditransitive (trivalent), that takes three arguments- the subject, the indirect object and the direct object; complex-transitive (trivalent), that takes three arguments- the subject, the direct object and the complement (Grossman & Alena, 2019; Andrej & Comrie, 2015; Luraghi, 2012; Goldberg, 1995). Therefore, the different types of main verbs that occur in natural languages are determined by the type and number of arguments demanded by such verbs. Such types as intransitive, transitive, ditransitive and complex transitive

verbs have been identified and distinguished (Grossman & Alena, 2019; Andrej & Comrie, 2015; Luraghi, 2012; Goldberg, 1995). Understanding these types of valency not only clarifies verb usage but also sets the stage for examining how the morphological structure of Kisa influences its argumentation.

The study of argument structure intersects with the domain of morphology. Depending on the language, the morphological shapes of verbs could have a direct bearing on the number and nature of the arguments they take (Wood & Myler, 2019). This weaves the morphology-syntax-semantics interphase in a language. Given that Kisa is an agglutinating language in which prefixes are used to represent the subject and the object as agreement markers, the morphology of Kisa could have a bearing on the argument structure of Kisa. For instance, the use of prefixes in Kisa not only indicates agreement but may also affect how many arguments can be expressed within a single verb form. The valency theoretical framework is essential for understanding the unique characteristics of Kisa’s argument structure and its implications for the broader field of linguistics.

**Thematic Roles**

Thematic relations, also known as thematic roles, are the various roles that noun phrases play with respect to the action or state described by a main verb. A number of thematic roles have been postulated (Anderson, Bronwyn, Derek, Julianne, Margaret, Nathan & Ai, 2022; Davis, 2019; Rappaport & Levin, 2015; Carnie, 2002; Radford, 1997; Haegeman, 1994). This paper draws on the thematic roles relevant to Kisa argument structure as determined by the valency theory summarised in table 3.

Table 3: Thematic Roles Adopted in this Paper

S/No.	Thematic role	Meaning
1	Agent	The entity that does the action described by a doing verb in a sentence or a clause
2	Patient	The entity that is being acted upon by the agent
3	Theme	The entity that neutrally undergoes the action or situation denoted by the verb without being acted on by an agent
4	Experiencer	The entity that receives sensory or emotional input denoted by the verb
5	Locative	The specification of the place where the action or event denoted by the verb is situated or occurs
6	Goal	The entity where the action denoted by the verb is directed towards
7	Beneficiary/Recipient	The entity for whose benefit the action or situation denoted by the verb occurs or the receiver in a situation described by a sentence or clause
8	Source/Origin	The location or entity from which the action denoted by the verb originated from
9	Stimulus	The entity that prompts sensory or emotional feeling but not deliberately
10	Force or natural cause	The entity that mindlessly performs/causes the action

**METHOD**

**Sampling Method and Sample Size**

The study used purposive sampling to select 1 female and 1 male informant based on their availability for data collection. Two informants were considered appropriate for the study given that every native speaker has the same linguistic competence about the language in question (Creswell & Creswell, 2017; Buchstaller & Khattab, 2003; Chomsky, 1962; Creswell, 1998). Although, working with one native speaker would yield the same results as working with more than one native speaker, and that consulting a range of speakers about the

same phenomenon would lead to replications of information and eventually superfluous information (Buchstaller & Khattab, 2003; Chomsky, 1962), the use of two native speakers both male and female in this study was to help guard against representing the speech characteristics of one individual and gender.

## Research Design

The study used a descriptive analytic research design. Descriptive analytic design describes a phenomenon and explains why and how a phenomenon exhibits particular characteristics with a view of identifying and establishing trends, relationships and patterns in the data collected. (Creswell & Creswell, 2017; Denzin & Lincoln, 2011). The study described and analysed the different types of geminates that occur in Kisa, how they are represented and how gemination relates to morphological organisation.

## Data Collection Method and Instrument

Data in this study was collected through elicitation method using an elicitation frame as the instrument. An elicitation frame is a fixed environment that is used for discovering or testing particular linguistic phenomenon and its patterns in various appropriate paradigms (Dörnyei, 2007; Vaux & Cooper, 2005). Elicitation frames in this study were used to collect valency patterns of main verbs and thematic role patterns of main verbs in different sentences in Kisa. For instance, an elicitation frame might include sentences such as 'The girl eats an apple' to explore the valency of the verb 'eats'. Elicitation method was deemed appropriate for the study because the data required was concerned with the linguistic competence of the informants in the form in which it occurs in their minds. Given that the researcher and the informants have no control about such information, the most appropriate way to get it was to make the informants produce it involuntarily.

## Data Collection, Analysis and Presentation

Data for the study was collected from the two informants using elicitation frames. The informants were asked to articulate sentences containing verbs with different valency declensions, as was presented in the elicitation frames. The elicitation frames contained sentences with all possible types of main verbs, arguments and thematic roles in Kisa. Data analysis, on the other hand, involved organizing, describing, explaining and discussing the data collected according to the type of valency, type and number of arguments and thematic roles for each argument. The data analysed was presented in descriptive write-ups in which examples alluded to were represented in a three or four tier format where appropriate and given morpheme by morpheme glossing followed by a free translation.

The methodological framework adopted here is essential for accurately capturing the nuances of Kisa's verb argument structures, contributing to a richer understanding of its linguistic properties.

## Valency and Argument Structure in Kisa

Kisa like other languages distinguishes four main types of valency: avalent, monovalent, divalent, trivalent; based on five types of main verbs: intransitive, mono transitive, ditransitive, complex transitive and intensive verbs. The following sub-sections discuss the valency structure of these verbs and their thematic role structure.

### Argument Structure of Avalent Verbs

In Kisa, as in other languages, avalent verbs do not have a determinate subject. They are therefore termed as impersonal verbs. The subject slot is filled by the pronoun 'it', which one wonders what it refers to. Consider the examples in the data in (1).

- 1) a. *i-la-nyirir-a*  
3sgS-HODF-drizzle-IND  
'It will drizzle'

b. *i-la-lum-a*

3sgS-HODF-bite-IND

‘It will bite’

Given that the verbs in (1) above do not allow a determinate subject or object, they are argued not to have a substantive argument structure. In these examples, the subject slot is occupied by the pronoun *i-* (it), which is a subject prefix in terms of agreement morphology. Note, however, that we can have an overt subject, as seen in the data in (2).

2) a. *i-Ø-fula*                      *i-la-nyirir-a*

AUG-9b-rain                      3sgS-HODF-drizzle-IND

‘The rain will drizzle’

b. *i-n-zala*                      *i-la-lum-a*

AUG-9b- hunger                      3sgS-HODF-bite-IND

‘The hunger will bite’

In this case, the subject prefix on the verb is interpreted as an agreement marker. However, typically, the constructions in (2) will be understood to have the same meaning when the overt subjects are omitted as in (1). Most often the overt subject is not present unless one intends to emphasize the subject. The fact that the argument structure of the verbs in (1) can be determined on the basis of the subject prefix *i-* ‘it’ in the absence of an overt subject, attests to the role of morphology in determining argument structure in Kisa.

### Argument Structure of Monovalent Verbs

Monovalent verbs, in Kisa, as in other languages, require one argument- the subject argument. They are, therefore, intransitive verbs because they do not require an object. As seen in the data in (3) the subject argument in monovalent verbs can be realised by a prefix just as is the case with aivalent verbs.

3) a. *a-la-kon-a*

3sgS-HODF-sleep-IND

‘He/she will sleep’

b. *a-la-lir-a*

3sgS-HODF-cry-IND

‘He/she will cry’

c. *a-la-tsekh-a*

3sgS-HODF-laugh-IND

‘He/she will laugh’

Note, however, that the subject arguments in the data in (3) can also be realised by overt subjects, as seen in the data in (4). As is the case with aivalent verbs, the subject prefixes in the verbs in (4) serve as agreement markers in agreement morphology.

- 4) a. *o-mu-khaana a-la-kon-a*  
AUG-1-girl 3sgS-HODF-sleep-IND  
'The girl will sleep'
- b. *o-mu-khaana a-la-lir-a*  
AUG-1-girl 3sgS-HODF-cry-IND  
'The girl will cry'
- c. *o-mu-khaana a-la-tsekh-a*  
AUG-1-girl 3sgS-HODF-laugh-IND  
'The girl will laugh'

The subject prefixes in the data in (3) point to a referent in the real world as a role player. The overt nouns as the subjects of these verbs in (4) identify and locate the specific referent in the real world as 'girl' not 'boy' or 'woman' or 'man' or 'baby'. Therefore, the data in (4) cannot be understood to mean exactly the same as the data in (3) when the overt subjects are omitted. Given that the verbs in (3) require the subject as an argument, as made specific in the data in (4), they have a substantive argument structure. Just as is the case with aivalent verbs, the argument structure of monovalent verbs as seen in the data in (3) can be determined by prefixes. This further supports the argument that, in Kisa, morphology plays a role in determining argument structure. To illustrate this fact further in this paper, the data that follows will be presented in two sets, one set with subject prefixes only and another set with overt subjects.

Monovalent verbs, in Kisa as in other languages, assign their subject arguments different thematic roles. The monovalent verbs in (3-4) above assign their subject arguments the thematic role of agent as the volitional and sentient doers or instigators of the actions denoted by the verbs.

Besides the agent role, subject arguments occurring with monovalent verbs in Kisa can be assigned the thematic role of theme as the entities that neutrally undergo the action or situation denoted by the verb without being acted on by an agent. Consider the data in (5-6).

- 5) a. *a-la-kwa-a*  
3sgS-HODF-fall-IND  
'He/she will fall'
- b. *a-la-fiimb-a*  
3sgS-HODF-swell-IND  
'He/she will swell'
- c. *a-la-khul-a*  
3sgS-HODF-grow-IND  
'He/she will grow'
- d. *a-la-raambiy-a*  
3sgS-HODF-grow tall-IND



'He/she will grow tall'

6) a. *o-mu-khaana a-la-kwa-a*

AUG-1-girl 3sgS-HODF-fall-IND

'The girl will fall'

b. *o-mu-khaana a-la-fiimb-a*

AUG-1-girl 3sgS-HODF-swell-IND

'The girl will swell'

c. *o-mu-khaana a-la-khul-a*

AUG-1-girl 3sgS-HODF-grow-IND

'The girl will grow'

d. *o-mu-khaana a-la-raambiy-a*

AUG-1-girl 3sgS-HODF-grow tall-IND

'The girl will grow tall'

The thematic role of experiencer can also be assigned to subject arguments by monovalent verbs. Consider the data in (7-8).

7) a. *a-la-lwaal-a*

3sgS-HODF-sick-IND

'He/she will fall sick'

b. *a-la-sinyikh-a*

3sgS- HODF-annoy-IND

'He/she will be annoyed'

c. *a-la-yaanz-a*

3sgS- HODF-be happy-IND

'He/she will be happy'

8) a. *o-mu-khaana a-la-lwaal-a*

AUG-1-girl 3sgS-HODF-sick-IND

'The girl will fall sick'

b. *o-mu-khaana a-la-sinyikh-a*

AUG-1-girl 3sgS- HODF-annoy-IND

'The girl will be annoyed'

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- c. *o-mu-khaana a-la-yaanz-a*  
AUG-1-girl 3sgS- HODF-be happy-IND  
'The girl will be happy'

The subject arguments in the data in (7-8) are assigned the thematic role of experiencer by the verbs because they are the entities that experience the event denoted by the verbs.

Subject arguments that occur with monovalent verbs in Kisa can also be assigned the thematic role of source, as the entity from which the action denoted by the verb originates, as seen in the data in (9-10).

- 9) a. *a-la-nyirikh-a*  
3sgS-HODF-spit-IND  
'He/she will spit'
- b. *a-la-sal-a*  
3sgS- HODF-vomit-IND  
'He/she will vomit'
- c. SR *a-le-nyaal-a*  
UR *a-la-inyaal-a*  
3sgS- HODF-urinate-IND  
'He/she will urinate'
- d. *a-la-ni-a*  
3sgS- HODF-defecate-IND  
'He/she will defecate'
- 10) a. *o-mu-khaana a-la-nyirikh-a*  
AUG-1-girl 3sgS-HODF-spit-IND  
'The girl will spit'
- b. *o-mu-khaana a-la-sal-a*  
AUG-1-girl 3sgS- HODF-vomit-IND  
'The girl will vomit'
- c. SR *o-mu-khaana a-le-nyaal-a*  
UR *o-mu-khaana a-la-inyaal-a*  
AUG-1-girl 3sgS- HODF-urinate-IND  
'The girl will urinate'
-

- d. *o-mu-khaana a-la-ni-a*  
 AUG-1-girl 3sgS- HODF-defecate-IND  
 ‘The girl will defecate’

### Argument Structure of Divalent Verbs

Divalent verbs, in Kisa as in other languages, are transitive. They take two arguments- a subject argument and an object argument, as seen in the data in (11). Because divalent verbs take one object, the direct object, they are said to be mono-transitive.

- 11) a. *a-la-ku-kul-a*  
 3sgS-HODF-3O-buy-IND  
 ‘He/she will buy it’
- b. *a-la-ka-teekh-a*  
 3sgS- HODF-6O-cook-IND  
 ‘He/she will cook them’
- c. *a-la-bu-tsukh-a*  
 3sgS- HODF-14O-pour-IND  
 ‘He/she will pour it’

Though the object arguments in the data in (11) are realised by prefixes, note, however, that, as is the case with subject arguments as stated earlier, they can also be realised by overt objects, as seen in the data in (12).

- |        |                                   |                     |                   |
|--------|-----------------------------------|---------------------|-------------------|
| 12) a. | <i>o-mu-khaana</i>                | <i>a-la-kul-a</i>   | <i>o-mu-saala</i> |
|        | AUG-1-girl                        | 3sgS-HODF-buy-IND   | AUG-3-tree        |
|        | ‘The girl will buy a tree’        |                     |                   |
| b.     | <i>o-mu-khaana</i>                | <i>a-la-teekh-a</i> | <i>a-ma-ramwa</i> |
|        | AUG-1-girl                        | 3sgS- HODF-cook-IND | AUG-6-banana      |
|        | ‘The girl will cook bananas’      |                     |                   |
| c.     | <i>o-mu-khaana</i>                | <i>a-la-tsukh-a</i> | <i>o-bu-sera</i>  |
|        | AUG-1-girl                        | 3sgS- HODF-pour-IND | AUG-14-porridge   |
|        | ‘The girl will pour the porridge’ |                     |                   |

Contrary to subject prefixes, object prefixes do not co-occur with overt objects as agreement markers in Kisa agreement morphology. This is seen in the ungrammaticality of the data in (13).

- |        |                       |                   |
|--------|-----------------------|-------------------|
| 13) a. | <i>*a-la-ku-kul-a</i> | <i>o-mu-saala</i> |
|        | 3sgS-HODF-buy-IND     | AUG-3-tree        |



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15) a	<i>o-mu-yeka</i>	<i>ku-la-suul-a</i>	<i>a-ma-tuuma</i>
	AUG-3-wind	3S-HODF-uproot-IND	AUG-6-maize
	‘The wind will uproot the maize’		
b	<i>o-mu-liro</i>	<i>ku-la-saamb-a</i>	<i>a-ma-ramwa</i>
	AUG-3-fire	3S-HODF-burn-IND	AUG-6-banana
	‘The fire will burn the bananas’		
c	<i>Ø -līi-china</i>	<i>li-la-arak-a</i>	<i>i-n-dabu</i>
	AUG-5b-stone	5S-HODF-break -IND	AUG-9b-pot
	‘The stone will break the pot’		
d	SR <i>o-lu-fu</i>	<i>lu-le-er-a</i>	<i>a-ba-ana</i>
	UR <i>o-lu-fu</i>	<i>lu-la-ir-a</i>	<i>a-ba-ana</i>
	AUG-11-death	11S-HODF-kill-IND	AUG-2-child

‘Death will kill the children’

The subject arguments in the data in (14-15) are the entities that cause the actions or they are the forces behind the actions denoted by the verbs. They, however, do this without volition and sentient, in which case they cannot be seen to be playing the role of agents. The object arguments in the data in (14-15) are argued to be taking the role of patient. This is because they are the entities that are acted upon by the subjects though mindlessly. They could have been thought to be themes but this is not the case because themes undergo an action without being acted upon by agents. The subjects here though not agents are the ones that are causing the actions that are happening to the objects. They, therefore, play a significant role in what is happening to the objects without which the event, state of affairs or situation expressed in the verb would not be tenable to the objects.

Subject arguments that occur with divalent verbs in Kisa can also be assigned the thematic role of source. Consider the data in (16) and (17).

16) a.	<i>a-la-lu-rul-a</i>
	3sgS-HODF-11O-go from-IND
	‘He/she will shed it’
b	<i>a-la-ka-raats-a</i>
	3sgS-HODF-6O-ooze-IND
	‘He/she will ooze them’
c.	<i>a-la-ka-roonya-a</i>
	3sgS- HODF-6O-drip-IND
	‘He/she will shed them’

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- 17) a. *o-mu-khaana*      *a-la-rul-a*      *o-lu-uya*  
 AUG-1-girl      3sgS-HODF-go from-IND      AUG-11-sweat  
 ‘The girl will sweat’
- b. *o-mu-khaana*      *a-la-raats-a*      *a-ma-tsaayi*  
 AUG-1-girl      3sgS-HODF-ooze-IND      AUG-6-tree  
 ‘The girl will ooze blood’
- c. *o-mu-khaana*      *a-la-roonya-a*      *a-ma-sika*  
 AUG-1-girl      3sgS-HODF-drip-IND      AUG-6-tear  
 ‘The girl will shed tears’

In the data in (16-17), the entities expressed by the objects originate from the entities expressed by the subjects. The subjects are, therefore, the sources or originators of the entities expressed by the objects. The objects in the data in (16-17) are themes. They are the entities that undergo the action expressed by the verbs without being acted upon by the entities expressed by the subjects. The subjects cannot be agents or causes or the force behind the actions expressed by the verbs. The actions occur without the volition of the subjects and regardless of the subject’s sentient.

Besides the roles of patient and theme as discussed above, object arguments that occur with divalent verbs can also be assigned the thematic role of experiencer, as seen in the data in (18-19)

- 18) a. *a-la-ba-chaay-a*  
 3sgS-HODF-2O-despise-IND  
 ‘He/she will despise them’
- b. *a-la-ba-heer-a*  
 3sgS-HODF-2O-love-IND  
 ‘He/she will love them’
- c. *a-la-ba-sir-a*  
 3sgS- HODF-2O-hate-IND  
 ‘He/she will hate them’
- d. *a-la-ba-siny-a*  
 3sgS- HODF-bore-IND  
 ‘He/she will bore them’
- 19) a. *o-mu-khaana*      *a-la-chaay-a*      *a-ba-ana*  
 AUG-1-girl      3sgS-HODF-2O-despise-IND      AUG-2-child  
 ‘The girl will despise the children’
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b	<i>o-mu-khaana</i>	<i>a-la-heer-a</i>	<i>a-ba-ana</i>
	AUG-1-girl	3sgS-HODF-2O-love-IND	AUG-2-child
	‘The girl will love the children’		
c.	<i>o-mu-khaana</i>	<i>a-la-sir-a</i>	<i>a-ba-ana</i>
	AUG-1-girl	3sgS-HODF-2O-hate-IND	AUG-2-child
	‘The girl will hate the children’		
d.	<i>o-mu-khaana</i>	<i>a-la-siny-a</i>	<i>a-ba-ana</i>
	AUG-1-girl	3sgS- HODF-2O-bore-IND	AUG-2-child
	‘The girl will bore the children’		

The object arguments in the data in (18-19) are assigned the thematic role of experiencer by the verbs because they are the entities that experience the event denoted by the verbs. The subject arguments in these examples are assigned the role of agent because they are the entities that are the volitional and sentient doers or instigators of the actions denoted by the verbs.

Object arguments that occur with divalent verbs can also be assigned the thematic role of stimulus. Consider the data in (20-21).

- 20) a. *a-la-bi-cham-a*  
3sgS-HODF-8O-like-IND  
‘He/she will like them’
- b. *a-la-ka-wuny-a*  
3sgS-HODF-6O-smell-IND  
‘He/she will smell them’
- c. *a-la-lu-wulir-a*  
3sgS-HODF-11O-listen-IND  
‘He/she will listen to it’
- 21) a. *o-mu-khaana*      *a-la-cham-a*      *e-bi-tuongwo*  
AUG-1-girl      3sgS-HODF-like-IND      AUG-8-onion  
‘The girl will like the onions’
- b. *o-mu-khaana*      *a-la-wuny-a*      *a-ma-raashi*  
AUG-1-girl      3sgS-HODF-smell-IND      AUG-6-perfume  
‘The girl will smell perfume’
- c. *o-mu-khaana*      *a-la-wulir-a*      *o-lwi-imbo*

AUG-1-girl

3sgS-HODF-listen-IND

AUG-11-song

‘The girl will listen to the song’

The object arguments in the data in (20-21) are the entities that prompt the sensory or emotional feelings denoted by the verbs but not deliberately. They are, therefore, assigned the thematic role of stimulus by the verbs. On the other hand, the subject arguments in this data are assigned the thematic role of experiencer by the verbs because they are the entities that receive the sensory or emotional input denoted by the verbs.

### Argument Structure of Trivalent Verbs

Trivalent verbs, in Kisa as in other languages, are transitive. They take three arguments. As in other languages, we distinguish two types of trivalent verbs in Kisa: the ditransitive verbs that take two objects- the direct and the indirect object and the complex transitive verbs that take a direct object and a complement. We discuss these separately in the following discussion.

### Argument Structure of Ditransitive Trivalent Verbs

Ditransitive trivalent verbs in Kisa, as in other languages, require three arguments, a subject argument and two object arguments- the direct and the indirect object, as the data in (22-23) shows. They are said to be ditransitive because they take two objects, the direct object and the indirect object.

22) a *a-la-shi-mu-h-a*

3sgS-HODF-7O-3sgO-give-IND

‘He/she will give it to him/her’

b *a-la-li-mu-reeb-a*

3sgS-HODF-5O-3sgO-ask-IND

‘He/she will ask it to him/her’

c *a-la-shi-mu-sab-a*

3sgS-HODF-7O-3sgO-request-IND

‘He/she will request it from him/her’

23) a *o-mu-khaana* *a-la-h-a* *o-mu-khasi* *e-shi-koombe*

AUG-1-girl 3sgS-HODF-give-IND AUG-1-woman AUG-7-cup

‘The girl will give the woman the cup’

b *o-mu-khaana* *a-la-reeb-a* *o-mu-khasi* *Ø-lii-reebo*

AUG-1-girl 3sgS-HODF-ask-IND AUG-1-woman AUG-5-cup

‘The girl will ask the woman a question’

c *o-mu-khaana* *a-la-sab-a* *o-mu-khasi* *e-shi-koombe*

AUG-1-girl 3sgS-HODF-request-IND AUG-1-woman AUG-7-cup

‘The girl will request the woman a cup’



The verbs in the data in (22-23) require the subject argument and the two object arguments for their meanings to be complete, hence they are trivalent verbs. Note that the two objects can be represented by object prefixes as seen in (22), but the object prefixes do not co-occur with overt objects as in the data in (23). In the data in (22), the prefixes *shi-* and *li-* marking the direct object come before the prefix *mu-* marking the indirect object. On the other hand, in the data in (23) where we have overt objects, the indirect object *omukhasi* comes before the direct objects *eshikoombe* and *liireebo*.

The subject arguments in the data in (22-23) are assigned the thematic role of agent by the verbs in question because they are the doers or instigators of the actions denoted by the verbs. And they do this with volition and sentient. The direct object arguments are assigned the thematic role of patient, given that they are the entities that receive the actions denoted by the verbs, and also because they are the entities that are acted upon by the agents expressed in the subject arguments. The indirect object arguments, on the other hand, are assigned the thematic role of beneficiary/recipient because they are the entities for whose benefit the action or situation denoted by the verbs occurs or because they are the receiver in the situations described.

### Argument Structure of Complex Transitive Trivalent Verbs

Complex transitive trivalent verbs in Kisa, as in other languages, require three arguments- a subject argument, a direct object argument and a complement argument, as the data in (24-25) shows. They are said to be complex transitive because they take a direct object and a complement.

24) a      *a-la-mu-yir-a=yo*  
 3sgS-HODF-3sgO-take-IND=there  
 ‘He/she will take him/her there’

b          *a-la-mu-ra-a=khu*  
 3sgS-HODF-3sgO-put-IND=on  
 ‘He/she will put him/her on it’

c          *a-la-mu-sukun-a=mu*  
 3sgS-HODF-3sgO-throw-IND=in  
 ‘He/she will throw him/her in it’

25) a      *o-mu-khaana a-la-yir-a*                      *o-mu-khasi i-n-go*  
 AUG-1-girl    3sgS-HODF-take-IND                      AUG-1-woman AUG-9b-home  
 ‘The girl will take the woman home’

b          *o-mu-khaana a-la-r-a*                      *o-mu-khasi khu-mu-saala*  
 AUG-1-girl    3sgS-HODF-put-IND                      AUG-1-woman on-3-tree  
 ‘The girl will put the woman on the tree’

c          *o-mu-khaana a-la-sukun-a*                      *o-mu-khasi mu-ma-atsi*  
 AUG-1-girl    3sgS-HODF-throw-IND                      AUG-1-woman in-3-water  
 ‘The girl will throw the woman in the water’

The verbs in the data in (24-25) require a subject argument, an object argument and a complement argument for their meanings to be complete, hence they are trivalent verbs. Note that the objects in these examples can be represented by prefixes while the complements can be represented by word level enclitics (Ondondo, 2013), as seen in (24). However, when overt objects are present, the object prefixes are left out and when overt complements are present the enclitics are left out as in the data in (25). Note that the complement in (25a) is a predicative complement in the form of a noun, while the complement arguments in (25b-c) are oblique complements in the form of locative constructions.

The subject arguments in the data in (24-25) are assigned the role of agent because they are the doers or instigators of the actions denoted by the verbs. The objects in the examples in the data in (24-25) are assigned the thematic role of patient because they are the entities that are acted upon by the agents expressed in the subjects. The complement arguments, on the other hand, are assigned the thematic role of goal because they are the entities where the action denoted by the verb is directed towards.

Subject arguments occurring with complex transitive trivalent verbs can as well be assigned the semantic role of cause or force. The data in (26-27) illustrate this.

- 26) a *ku-la-lu-yir-a=mwo*  
 3S-HODF-110-take-IND=in it  
 ‘It will take it in it’
- b *ku-la-ka-sukun-a=khwo*  
 3S-HODF-60-throw-IND=on it  
 ‘It will throw them on it’
- 27) a *o-mu-yeka*                      *ku-la-yir-a*                      *o-lu-fu*                      *mu-ma-atsi*  
 AUG-3-wind                      3S-HODF-take-IND                      AUG-11-dust                      in-3-water  
 ‘The wind will take the dust in the water’
- b *o-mu-yeka*                      *ku-la-sukun-a*                      *a-ma-saafu*                      *khu-un-zu*  
 AUG-3-wind                      3S-HODF-throw-IND                      AUG-11-leaf                      on-9b-house  
 ‘The wind will throw leaves on the house’

The objects in the examples in the data in (26-27) are assigned the thematic role of patient because they are the entities that are acted upon by the agents expressed in the subjects though mindlessly. The complement arguments, in these examples, get assigned the thematic role of goal. They are the entities where the action denoted by the verb is directed towards. The complement arguments in (27a) are oblique complements in the form of locative constructions.

Complement arguments in complex transitive verbs can also be assigned the thematic role of source or origin. Consider the data in (28-29).

- 28) a *ku-la-ka-yiini-a=khwo*  
 3S-HODF-60-remove-IND=on it  
 ‘It will take them from it’
- b *ku-la-ka-suul-a=mwo*

3S-HODF-60-uproot-IND=in it

‘It will uproot them from it’

29) a *o-mu-yeka* *ku-la-yiini-a* *a-ma-saafu* *khu-mu-saala*

AUG-3-wind 3S-HODF-remove-IND AUG-6-leaf on-3-tree

‘The wind will remove the leaves from the tree’

b *o-mu-yeka* *ku-la-suul-a* *a-ma-tuuma* *mu-mu-kuunda*

AUG-3-wind 3S-HODF-uprot-IND AUG-6-maize in-3-farm

‘The wind will uproot the maize from the farm’

The complement arguments in the examples in the data in (28-29) are assigned the role of source or origin, since they are the entities from which the action denoted by the verb originates. Note that the subject arguments in these examples are assigned the thematic role of cause or force, while the object arguments re assigned the role of patient. The complement arguments in (29a) are also oblique complements in the form of locative constructions

### Argument Structure of Intensive Verbs

Intensive verbs in Kisa as in other languages do not take objects. Instead, they require complements for their meaning to be complete. Two types of complements are distinguished thus predicative complements and oblique complements. Predicative complements, in Kisa, can be nouns or adjectives, while oblique complements can be locative constructions or adverbs. In terms of argument structure, intensive verbs can be divalent or trivalent.

### Argument Structure of Divalent Intensive Verbs

Divalent intensive verbs require two arguments. There are those that require a subject argument and a predicative complement argument and those that require a subject argument and an oblique complement argument. The predicative complement can be a subject complement in the form of an adjective (30a and 31a) or a noun (30b and 31b).

30) a *a-la-b-a* *o-mu-layi*

3sgS-HODF-be-IND AUG-1-good

‘He/she will be good’

b *a-la-b-a* *o-mu-ruchi*

3sgS-HODF-be-IND AUG-1-king

‘He/she will be the king’

a *o-mu-khaana* *a-la-b-a* *o-mu-layi*

AUG-1- girl 3sgS-HODF-be-IND AUG-1-good

‘The girl will be good’

b *o-mu-khaana* *a-la-b-a* *o-mu-ruchi*

AUG-1- girl 3sgS-HODF-be-IND AUG-1-king

‘The girl will be the king’

The oblique complement can be a locative construction (32a and 33a) or an adverb (32b and 33b).

31) a *a-la-tiiy-a=mwo*

3sgS-HODF-work-IND=in it

‘He/she will work in it

b *a-la-b-a* *bwaangu*

3sgS-HODF-be-IND quickly

‘He/she will be in a hurry’

32) a *o-mu-khaana a-la-tiiy-a* *mu-mu-kuunda*

AUG-1-girl 3sgS-HODF-work-IND in-3-farm

‘The girl will work in the farm’

b *o-mu-khaana a-la-b-a* *bwaangu*

AUG-1-girl 3sgS-HODF-be-IND quickly

‘The girl will be in a hurry’

The subject arguments in the preceding examples, except for (32a) are assigned the thematic role of theme. They are the entities that neutrally undergo the action or situation denoted by the verb without being acted on by an agent. The predicative complement arguments and the oblique complement arguments in the said examples are assigned the thematic role of theme, just like the subject argument, because they are giving attributes of the subject argument.

The subject argument in the data in (32a), on the other hand, is assigned the thematic role of agent as the entity that does the action described by the verb in the sentence. The oblique complement argument in this example is assigned the thematic role of locative. It specifies the place where the action or event denoted by the verb is situated, occurs or takes place.

Oblique complement arguments in Kisa can also be assigned the thematic role of goal as the entity where the action denoted by the verb is directed towards. Consider the data in example (34 and 35).

33) a SR *a-la-tsya-a=mwo*

UR *a-la-tsi-a=mwo*

3sgS-HODF-go-IND=in it

‘He/she will go in it’

b *a-la-yir-a=mwo*

3sgS-HODF-take -IND=in it

‘He/she will take it in it

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34) a	SR	<i>o-mu-khaana</i>	<i>a-la-tsy-a</i>	<i>mu-mu-kuunda</i>
	UR	<i>o-mu-khaana</i>	<i>a-la-tsi-a</i>	<i>mu-mu-kuunda</i>
		AUG-1-girl	3sgS-HODF-go-IND	in-3-farm
		‘The girl will go to the farm’		
b		<i>o-mu-khaana</i>	<i>a-la-yir-a</i>	<i>mu-mu-kuunda</i>
		AUG-1-girl	3sgS-HODF-take -IND	in-3-farm
		‘The girl will take it to the farm’		

Similarly, oblique complement arguments in Kisa can also be assigned the thematic role of source, as the location or entity from which the action denoted by the verb originates from. Consider the data in example (36 and 37).

35) a		<i>a-la-rul-a=yo</i>		
		3sgS-HODF-go from-IND=there		
		‘He/she will come from there’		
b		<i>a-la-wuuy-a=mwo</i>		
		3sgS-HODF-move from -IND=in it		
		‘He/she will move from there’		
36) a		<i>o-mu-khaana</i>	<i>a-la-rul-a</i>	<i>mu-mu-kuunda</i>
		AUG-1-girl	3sgS-HODF-go from-IND	in-3-farm
		‘The girl will leave the farm’		
b		<i>o-mu-khaana</i>	<i>a-la-wuuy-a</i>	<i>mu-mu-kuunda</i>
		AUG-1-girl	3sgS-HODF-move from -IND	in-3-farm
		‘The girl will move from the farm’		

### Argument Structure of Trivalent Intensive Verbs

Trivalent intensive verbs, on the other hand, require three arguments. In Kisa, trivalent intensive verbs typically take a subject argument, an object argument and a predicative object complement as the data in (38 and 39) shows.

37) a		<i>a-la-mu-haan-a</i>	<i>e-shi-yaanwa</i>
		3sgS-HODF-3sgO-give out-IND	AUG-7-gift
		‘He/she will give him out as a sacrifice’	
b	SR	<i>a-la-mwe-er-a</i>	<i>o-mwa-ami</i>

UR *a-la-mu-er-a* *o-mu-ami*

3sgS-HODF-3sgO-elect-IND AUG-1-king

‘He/she will elect him the King’

38) a *o-mu-khaana a-la-haan-a* *o-mu-khasi e-shi-yaanwa*

AUG-1-girl 3sgS-HODF-give out-IND AUG-1-woman AUG-7-gift

‘The girl will give out the woman as a sacrifice’

b SR *o-mu-khaana a-le-er-a* *o-mu-khasi o-mwa-ami*

UR *o-mu-khaana a-la-er-a* *o-mu-khasi o-mu-ami*

AUG-1-girl 3sgS-HODF-elect-IND AUG-1-woman AUG-1-king

‘The girl will elect him the King’

The subject argument in the data in (38 and 39) are assigned the thematic role of agent. They are the entities that do the actions described by the verb in these sentences. The object arguments, in these examples, are assigned the thematic role of patients. They are the entities that are being acted upon by the agents. The object complements arguments in these examples, on the other hand, are assigned the thematic role theme, because they can be argued to be the entities that neutrally undergo the actions or situations denoted by the verbs without being acted on by the agents. Note that the object arguments can in addition be argued to be taking the role of theme. This is because they are in a coreferential relationship with their complements- the object complements arguments- which are assigned the thematic role of theme as stated above.

## CONCLUSION

Kisa argument structure is based on valency theory. Four types of valency are identified: aivalent (impersonal verbs), monovalent (intransitive verbs), divalent (monotransitive verbs), trivalent (ditransitive verbs), and complex transitive verbs, which can be either trivalent or divalent. The argument structure of Kisa is identified in reference to the syntactic and semantic roles assigned to the participants in a predicate. The syntactic roles identified in Kisa argument structure are, subjects, objects (both direct and indirect), complements, subject complements, object complements and oblique complements. In Kisa, subject arguments can be assigned thematic roles such as agent, theme, experiencer, and cause/force, while direct objects may take on roles like patient, theme, experiencer or stimulus. Indirect objects are assigned the thematic role of beneficiary/recipient. Complements in Kisa are assigned the thematic roles of goal and source/origin while oblique complements are assigned the thematic roles of theme, locative, goal and source/origin. Subject and object complements, on the other hand, are assigned the thematic role of theme. Impersonal verbs in Kisa do not have a substantive argument structure. They are aivalent because they do not have a determinate subject or object. In Kisa, subject, object, complement as well as some oblique arguments can be marked by prefixes and clitics. This shows the morphology-syntax-semantics interphase at play in the determination Kisa argument structure. These findings not only contribute to our understanding of Kisa’s unique linguistic characteristics but also offer insights into the broader applications of valency theory across different languages. Overall, this study underscores the intricate relationship between valency, thematic roles, and morphology in Kisa, enriching the understanding of its linguistic structure and paving the way for future research in the field.

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