Valency-changing Operations in Nk̀o.ọ́ọ̀ (Kìrìkà)

By

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Abstract

Every language employs some valency-changing operation that either decreases or increases the transitivity of the verb. In the grammar of languages, the verb is considered to be the most important element in the sentence structure, and valence is the most common category of verbal morphology, surpassing tense, aspect, and subject agreement. However, it is often overlooked in the linguistic descriptions of many African languages. Moreso, within the Ijoid language family, this verbal category is under-described. This paper investigated the valency-changing operational types in Nkọ.ọọ, an Eastern Ijoid language spoken in the Niger delta region of Nigeria, West Africa. The data gathered from competent native speakers via elicitation and participant observation was analyzed within the qualitative research design. The findings revealed that Nkọ.ọọ employs five valency-changing operations. Processes for decreasing the valency of a verb include passive, reflexive, deletion of an internal argument, and demotion of an internal argument. To increase verb valency, Nkọ.ọọ employs a morphological causative marker. The paper established that Nkọ.ọọ utilizes both morphological and syntactic means of decreasing and increasing valency, and that the operation of valence is both derivational and inflectional.

Keywords: Nkọ.ọọ, Ijoid, arguments, transitivity, valency

1. Introduction

Traditionally, the sentence structure of languages consists minimally of a subject and a predicate. The verb is considered to be the most important element in the sentence structure, and as such, most often, the predicate is headed by the verb, which is accompanied by one or more core arguments, also known as valents, that are dependent on the verb. Finegan (1994) defines the verb as a lexical category

that syntactically determines the structure of a clause especially with respect to noun phrases (which function as the arguments of the verb). The number and nature of the core argument is determined by the valency attributed to the verb (Crystal, 1997; Dixon and Aikhenvald, 2000).

According to Crystal (1997, p.407), valency is concerned with "the number of valents with which a verb is combined to produce a WELL-FORMED sentence nucleus…" A verb which takes no argument is said to be avalent. A verb that takes only one core argument is said to be univalent, bivalent when it takes two arguments, and trivalent when it takes three arguments. Every language employs some operation that either decreases or increases the number of arguments that the verb takes. These are called valency changing operations.

Although the verb is considered to be the most important element in the sentence structure in the grammar of languages and every language employs some valency-changing operation, the category of valence is often overlooked in the linguistic descriptions of many African languages. It is obviously under-described within the Ijoid language family which belongs to the Niger-Congo phylum. Verbal categories such as tense, aspect, and negation receive greater attention in the literature. Thus, the aim of this paper is to provide a description of the various operations employed in decreasing and increasing the valency of the verb in Nkọ̀rọ̀ọ̀, an Eastern Ijọ̀ language that has Kalabàri, Ịbàni, and Kịrịkẹ̀ as its closest linguistic relatives. To achieve this, data was gathered from competent native speakers via elicitation and participant observation. It is worth mentioning that the Nkọ̀rọ̀ọ̀ language is referred to as Kirika by its speakers (Obikudo. 2013, 2022) and is spoken in the Opobo/Nkọ̀rọ̀ọ̀ local government area of Rivers state, Nigeria, West Africa.

2. Literature review

Traditional grammar makes a distinction between transitive and intransitive verbs. Transitivity is a property of verbs that relates to the ability of a verb to take a direct object. Transitive verbs take direct objects, for instance, buy, catch, bite, etc., while intransitive verbs do not take direct objects, for instance, die, sleep, go, etc. Verbs may be grouped into three transitivity classes namely, intransitive, transitive, and ambitransitive.

Many languages mark transitivity through morphology. For instance, in languages with polypersonal agreement, an intransitive verb will agree with the subject only while a transitive verb will agree with both subject and indirect object. In other languages, the distinction between transitive and intransitive verbs is based on syntax. For instance, it is possible to identify a transitive verb in English by attempting to supply it with an appropriate direct object as in example (1). On the contrary, attempting to supply an intransitive verb with a direct object will result in an ungrammatical sentence (cf. 2a & b).

(1) a. She bought **a bag**.
b. He caught **the ball**.

(2) a. *He died **a death**.
b. *She slept **a sleep**.

Although intransitive verbs may not take a direct object, they may take an appropriate indirect object (cf. 3a & b). They may also take cognate objects that are considered to be integral to the action carried out by the verb (cf. 4a & b).

(3) a. She laughed **at him**.
b. He danced **with her**.

(4) a. She slept **an hour**.
b. He walked **a mile**.

Transitive verbs may take one or more objects. Monotransitive verbs take only one object – a direct object, while ditransitive verbs take two objects – a direct object (DO) and an indirect object (IO). In example (5), the verb *injure* is monotransitive while *catch* and *buy* are ditransitive.

(5) a. He injured **himself** (DO).
b. John caught **a fish** (DO) for **his mother** (IO).
c. I bought **her** (IO) **a dress** (DO).

On the other hand, ambitransitive verbs have both a transitive and an intransitive meaning. For instance, in Kpelle, a Mande language, the verb **kula** in intransitive use means 'exit' (which includes to 'go out' and 'come out'), while its transitive meaning includes to 'remove', 'pull out', 'bring out', 'put out', and 'take out' (Welmers, 1973 p.397). In English, there are a number of ambitransitive verbs as seen in examples (6) and (7).

(6) a. The pirates sank the boat. (transitive)
b. The boat sank. (intransitive)

(7) a. The boy broke the cup. (transitive)
b. The cup broke. (intransitive)

Transitivity is closely related to valency. Valency is both a semantic as well as a syntactic notion. Semantically, valency refers to the number of arguments that are necessary to form a sentence with the verb, while syntactically, valency refers to the number of arguments that occur in the sentence (Payne, 1997; Wunderlich, 2012). Thus, Worku (2020, p.421) defines valency as "the basis for how verbs are divided into distinct semantic and grammatical classes on the basis of the number of arguments (valents) they take." Although valency and verb transitivity are closely related, they are not identical. While transitivity counts only object arguments of a verbal predicate, valency includes all arguments, including the subject of the verb. In other words, transitivity refers to the number and type of core arguments that are determined by the verb while valency relates only to the number of overt argument noun phrases a verb may combine with (Kibort, 2008, p.9). Valency thus refers to the number of arguments controlled or licensed by a verbal predicate. Two types of argument exist within the sentence structure; the external argument that occupies the subject position, and the internal argument that occupies the object position. The external argument performs the semantic role of agent, that is, the performer of the action described by the verb, while the internal argument performs the semantic role of patient, that is, the entity that undergoes the verbal action.

Intransitive verbs are called univalent, monovalent or one-place argument verbs because they take only one argument which is the subject (that is, the external

argument). Transitive verbs are either bivalent or trivalent. They are bivalent when they take two arguments – an external argument and an internal argument (that is, a direct object). They are trivalent when they take three arguments consisting of an external argument and two internal arguments (that is, a direct object and an indirect object). Bivalent verbs are two-place argument verbs while trivalent verbs are also known as three-place argument verbs.

Most languages employ some morphological or syntactic means of increasing or reducing transitivity. According to Payne (1997, p.172), "Ninety percent of the languages investigated by Bybee (1985) have morphological manifestation of valence marked on the verb. This is the most common category of verbal morphology, even surpassing tense, aspect, and subject agreement. In 84 percent of the languages, valence is a derivational operation, while in 6 percent it is inflectional. So, while tense, aspect, and subject agreement are more common *inflectional* operations, valence is more common overall." Thus, valency changing operations refer to the various ways in which transitive verbs may be transformed into intransitive verbs and vice versa. As opined by Payne (1997), they are very common in the verbal morphology of languages and typically increase or decrease the number of core arguments that occur with the verb. Alternatively, valency-changing operations may not affect the number of core arguments but alter their semantic roles instead (Dixon and Aikhenvald, 2000). Operations that increase verb valence include causative and applicative while valency-decreasing operations include passive and anticausative, antipassive, reflexive, and reciprocal. In the present study, only the operations that are observable in the Nkọ̀rọ̀ọ̀ language will be discussed in the sections below.

3. The syntactic structure of Nkọ̀rọ̀ọ̀ verbs

Syntactically, Nkọ̀rọ̀ọ̀ verbs can be classified according to the number of arguments they can take. We can identify one-place argument verbs, two-place argument verbs, and three-place argument verbs.

3.1 One-place argument verbs

One-place argument verbs are traditionally known as intransitive verbs. They license only one argument, that is, an external argument. The external argument is a noun phrase that functions as the subject of the sentence and plays the

semantic role of agent. In example (8) below, the external argument is the third person singular feminine pronoun 'she' that functions as the performer of the action. One-place argument verbs may be stative or dynamic. Examples of one-place argument static verbs include **sie** 'be bad', **gboli** 'be short', and **findi** 'be open'. Examples of one-place argument dynamic verbs include **bọ́** 'come', **omu** 'go', and **meḿndí** 'walk'.

(8) á meḿndí-máa 'She is walking'
3SG.F walk-PROG

3.2 Two-place argument verbs

Traditionally known as transitive verbs, two-place argument verbs license two arguments – an external argument and an internal argument. The internal argument is the noun phrase that functions traditionally as the direct object and is assigned the semantic role of patient. Examples include **peḭ́** 'eat', **ofí** 'sweep', **peḷéḭ́** 'cut', and **órī̀** 'see'. In example (9), the nouns **oní** and **o** function as external and internal arguments respectively of the verb 'cut'.

(9) oní o bíọ́ peḷeḭ 'They cut his leg'
3PL 3SG.M leg cut

3.3 Three-place argument verbs

Three-place argument verbs license three arguments, that is, one external argument and two internal arguments. In traditional grammar, the internal arguments correspond to the direct and indirect objects. All the arguments of the verb precede the verb in the sentence structure. Usually, verbs that function as three-place argument verbs include verbs of giving, verbs of placing and instrumental verbs (Katamba, 1993). Examples in Nkọ́rọọ́ include **pirí** 'give', **bọ́lọ̄** 'borrow', and **jíā** 'show'. Apart from the semantic role of patient (that corresponds to the direct object), the internal argument of the three-place argument verb (that corresponds to the indirect object) performs additional semantic roles. For instance, in example (10), **Opunyé** is the external argument and agent, while **lógō** and **i** are the internal arguments. **Lógō** 'story' is assigned the semantic role of patient while **i** '1st person singular pronoun' is assigned the semantic role of recipient because it is the benefactor of the action described by the verb.

(10) Opunyé lógō mié i pirí 'Opunye told me a story'
PN story AUX 1SG give

4. Valency changing operations in Nkọ̀ọ̀ọ̀

Nkọ̀ọ̀ọ̀ employs both morphological and syntactic means of decreasing and increasing valency, and the operations are derivational and inflectional. The valency-changing operational types in Nkọ̀ọ̀ọ̀ are discussed in the following subsections.

4.1 Means of decreasing the valency of a verb in Nkọ̀ọ̀ọ̀

There are four operations that are capable of decreasing the valency of a verb (that is, turning a transitive verb into an intransitive verb) in Nkọ̀ọ̀ọ̀. They include passive, reflexive, deletion of an internal argument, and demotion of an internal argument.

4.1.1 Passive voice

In languages that have passive voice, the valency of a two-place or three-place argument verb can be decreased by using the verb in the passive voice. When a sentence is passivized in Nkọ̀ọ̀ọ̀, the external argument is deleted, and a verbal suffix is attached to the verb to mark the passive voice. This leaves the internal argument that plays the role of patient and the verb in the passive voice as the only constituents of the sentence. Nkọ̀ọ̀ọ̀ thus operates agentless passives. This operation is inflectional because the addition of the passive marker changes the form of the verb without creating a new word from it. The passive marker is –**miní** with –**ní** as a variant and can be used with tense and aspectual markers, namely non-future time, perfective, and progressive aspect.

i. Passive marker with non-future time

The form of the passive marker used with the verb when it expresses non-future time is –**miní**.

(8) a. wá nji mḿ pẹ́ 'We ate the fish'
(Active voice)
1PL fish DEF eat

b. nji mḿ pẹ́-miní 'The fish was eaten'
(Passive voice)
fish DEF eat-PASS

(9) a. oní íríára mˊ libí 'They buried the woman' (Active voice)
3PL woman DEF bury

b. íríára mˊ libi-miní 'The woman was buried' (Passive voice)
woman DEF bury-PASS

ii. Passive marker with perfective aspect

The form of the passive marker used with the verb when it takes the perfective aspectual marker is **–ní**. Both markers are suffixed to the verb, and the passive marker follows the perfective.

(10) a. wá nji mˊ peị́-suku 'We have eaten the fish' (Active voice)
1PL fish DEF eat-PFV

b. nji mˊ peị́-suku-ní 'The fish has been eaten' (Passive voice)
fish DEF eat-PFV-PASS

(11) a. oní íríára mˊ libi-suku 'They have buried the woman' (Active voice)
3PL woman DEF bury-PFV

b. íríára mˊ libi-suku-ní 'The woman has been buried' (Passive voice)
woman DEF bury-PFV-PASS

iii. Passive marker with progressive aspect

The form of the passive marker used with the verb when it expresses progressive action or state is **– miní**. The progressive aspect is marked by the suffix **–máa** which is reduced to a monosyllable **–ma** or **–má** when occurring with the passive marker. The tone of the progressive in the passive construction is dependent on the tone on the last vowel of the host verb.

(12) a. wá=ńdē nji mˊ peḭ́-máa 'We are eating the fish' (Active voice)
1PL=SCL fish DEF eat-PROG

b. nji mˊ peḭ́-má-míní 'The fish is being eaten' (Passive voice)
fish DEF eat-PROG-PASS

(13) a. oní=ńdē íríára mˊ libi-máa 'They are burying the woman' (Active voice)
3PL=SCL woman DEF bury-PROG

b. íríára mˊ libi-ma-miní 'The woman is being buried' (Passive voice)
woman DEF bury-PROG-PASS

The (b) examples in numbers 8 – 13 show the deletion of the external argument in the passive constructions. This process reduces the number of arguments or valents that the verb takes. It also affects the structure of the sentence. The sentences in the active voice as observed in the (a) examples have a Subject-Object-Verb structure while the sentences in the passive voice as seen in the (b) examples have an Object-Verb structure.

4.1.2 Reflexive

In a prototypical reflexive construction, both the subject and the object refer to the same entity. In other words, the action expressed by the verb is being carried out by the external argument on itself. Thus, the argument is both the agent and patient. Languages may employ lexical, morphological, or analytic reflexives to express this notion. Nkọ̀ọ̀ọ̀ employs analytic reflexives, much like the English language, where the "reflexive operation is expressed via a lexical word that is distinct from the verb" (Payne, 1997, p.200). Nkọ̀ọ̀ọ̀ reflexives are derived from a combination of the bound form of the personal pronouns, and the nouns **bụ́** 'self' and **odu** 'skin' (of animal). The reflexives are listed in example (14).

(14) Nkọ̀rọ̀ọ̀ reflexive pronouns

i bụ odu	'myself'	a bụ odu	'itself'
í bú odu	'yourself'	wá bú odu	'ourselves'
o bụ odu	'himself'	ó bú odu	'yourselves'
á bú odu	'herself'	oní bú odu	'themselves'

The reflexive construction as a valency-reducing operation involves a transitive verb that normally licenses two or three arguments, occurring with only one argument – the external argument, which is understood to be both the agent and the patient in the construction.

(15)	o	bụ	odu	wo	íyé	'He did (it) himself'
	3SG.M self	skin	NOM	do		

(16)	á bú	odu	peḷe̩		'She cut herself'
	3SG.F self	skin	cut		

4.1.3 Deletion of internal argument

Another means of decreasing the valency of a verb is by deleting its direct object or internal argument. This operation is also known as object omission and is mostly applied to two-place argument verbs. The position of the deleted internal argument may be replaced by the nominative case marker, **wo**. Hence, a two-place argument verb that licenses both an external and an internal argument is reduced to licensing only one argument, that is, the external argument.

(17)	a. Bomá	bílébíín	ofí	'Boma swept (the) room'
	PN	room	sweep	

	b. Bomá	wo	ofí	'Boma swept'
	PN	NOM	sweep	

4.1.4 Demotion of internal argument

The internal arguments of both two-place and three-place argument verbs may be replaced by the noun **yé** 'thing'. This operation, which is also called object demotion, downplays the centrality of the internal argument, thus decreasing the valency of the verb.

Demotion of the internal argument (direct object) of two-place argument verbs

(18) a. Bomá nji fẹ́ẹ́ 'Boma bought fish'
PN fish buy

b. Bomá yé fẹ́ẹ̄ 'Boma bought (something)'
PN thing buy

(19) a. wá bụ́ru fí-suku 'We have eaten yam'
1PL yam eat-PRF

b. wá yé fí-suku 'We have eaten (something)'
1PL thing eat-PFV

Demotion of the internal argument (direct object) of three-place argument verbs

(20) a. Bomá ókúrú mˊ wá i pirí 'Boma gave me the cloth'
PN cloth DEF PRT 1SG give

b. Bomá yé wá i pirí 'Boma gave me something'
PN thing PRT 1SG give

4.2. Means of increasing the valency of a verb in Nkọ́rọ́ọ̀

Increasing the valency of a verb involves turning an intransitive verb into a transitive verb. There is one means by which this is achieved in Nkọ́rọ́ọ̀; by attaching the causative morpheme to the verb. This operation is derivational because a new verb is derived from the verb root to which the causative is attached.

4.2.1 Causativity

A causative form of a verb is one way of turning an intransitive verb into a transitive verb since the causative construction is a transitive one. Causativity refers to the means by which a subject creates a change in the state of an event, or makes someone or something else to do or become something. A causative construction is defined as a structure that is derived from a simple active sentence by adding a new argument to indicate the role of causer (Palmer, 1994). Causatives can be formally categorized into three types: lexical causatives, morphological causatives and analytic causatives (Comrie, 1989; Payne, 1997; Dixon, 2000). Nkọ̀rọ̀ọ̀ employs morphological causatives that are derived via a change in the form of the verb. For a verb form to qualify as a morphological causative, it must be productive such that when applied to a number of verbs, it derives the same result. Many languages achieve this through the use of causative affixes. In Nkọ̀rọ̀ọ̀, the causative morpheme is a low tone suffix –**ma**. When attached to verbs, it yields the meaning 'make V' or 'cause to be V', where V is the verb. As such, the valency of the verb increases from one argument to two or three arguments. When attached to a stative verb (which are usually one-place argument verbs), a dynamic verb is derived. Example (21) provides a list of one-place argument stative verbs and their two-place argument counterparts that are derived by suffixing the causative marker –**ma** to the verb root.

(21) Causative marker attached to one-place argument stative verbs

nángúọ̄	'be long'	nángúọ̀ma	'lengthen'
gbọ́ọ́n	be straight'	gbọ́ọ́nma	'straighten'
sie	'be bad'	siema	'destroy, spoil'
kuro	'be strong, be hard'	kuroma	'harden'
jái	'be calm'	jáima	'cease, stop' (make calm)
zárárá	'be flat'	záráráma	'flatten'
kpataka	'be low'	kpatakama	'lower'
bọ̀bọ̀	'be soft'	bọ̀bọ̀ma	'soften'
gboli	'be short'	gbolima	'shorten'
tie	'be low'	tiema	'lower'

findi	'be open'	findima	'dry/spread out'
peḳeḷeḛ	'be wide'	peḳeḷeḛma	'widen'

(22) a. árú má sie 'The canoe is bad'
canoe DEF be.bad

b. awoḛ má árú má siema 'The children destroyed the canoe'
children DEF canoe DEF be.bad-CAUS

In example (22a), the verb **sie** 'be bad' takes only one argument **árú má** 'the canoe', which plays the semantic role of patient. When the causative marker is attached to **sie** in example (22b), the verb takes on an external argument, **awoḛ má** 'the children', that functions as the agent, in addition to the internal argument, thus increasing its valency. The causative morpheme –**ma** can also be attached to intransitive dynamic verbs as a way of increasing the valency of the verb as seen in example (23).

(23) Causative marker attached to one-place argument dynamic verbs

gbéké	'fall'	gbékema	'drop'
kóró	'alight'	kóroma	'drop'

The use of morphological causatives in many languages is restricted to intransitive verbs. However, in Nkoḛroọ, the causative morpheme –**ma** can be applied to both intransitive verbs (as seen in the examples 21 – 23) and transitive verbs to form the causative of that verb. When it is attached to a transitive verb, another transitive verb is formed. This shows that it is a derivational process.

(24) Causative marker attached to two-place and three-place argument verbs

teḛḿ	'pound'	teḛḿma	'crush'
boḛlo͞	'borrow'	boḛloma	'lend'
seḛke͞	'carry'	seḛkema	'raise, lift'

In most languages, causativity is associated with the verb. This is also the case in Nkọ̀rọ̀ọ̀. However, there is a lone example of the causative marker being attached to the noun **firi** 'work' to derive the verb **firima** 'send, order (someone)'; in other words, 'cause someone to work'. It is noteworthy that this process is not productive with nouns. Evidence from some dialects of Ijo, Ịzọ̀ọ̀n to be specific, such as Kolokuma and Okordia, reveal that the word **firí** means 'send'. So, it is likely that in Nkọ̀rọ̀ọ̀, this verb has been lost synchronically but is still in use with the causative marker.

Conclusion

Despite the fact that valence is the most common category of verbal morphology, even surpassing tense, aspect, and subject agreement (Payne, 1997), it is often overlooked in the linguistic descriptions of many African languages. Within the Ijoid language family, valence is an under-described verbal category. In investigating the operational types employed in decreasing and increasing the valency of the verb in Nkọ̀rọ̀ọ̀, an Eastern Ijoid language spoken in the Niger delta region of Nigeria, West Africa, this paper established five valency-changing operations – four for decreasing valency and one for increasing valency. The valency decreasing operations include passive, reflexive, deletion of an internal argument, and demotion of an internal argument. To increase verb valency, Nkọ̀rọ̀ọ̀ employs a morphological causative marker. In terms of the syntactic structure of the verb, the paper identified one-place, two-place, and three-place argument verbs. The external and internal arguments were identified as the two types of arguments that are dependent on the verb.

As a valency decreasing operation, Nkọ̀rọ̀ọ̀ employs agentless passive constructions. The deletion of the external argument in the passive constructions reduces the number of arguments that the verb takes, thus decreasing its valency. The reflexive construction involves a two-place or three-place argument verb occurring with only the external argument, which performs the semantic roles of both the agent and the patient in the construction. The internal argument of a two-place argument verb may also be deleted, thus decreasing its valency to a one-place argument verb. Another means of decreasing verb valency is by demoting the internal argument (that is, the direct object) of two-place and three-place argument verbs, and replacing it with the noun **yé** 'thing', thus downplaying the

centrality of the internal argument. As a valency increasing operation, the causative marker can be applied to one-place, two-place, and three-place argument verbs.

The paper established that Nkọ́rọ́ọ̀ utilizes both morphological and syntactic means of decreasing and increasing valency. The morphological means of changing verb valence in Nkọ́rọ́ọ̀ is both inflectional and derivational. While the passive is an inflectional process, the causative is derivational. Both operations are morphologically marked on the verb via suffixation. The deletion of the external argument in the passive construction and the deletion of the internal argument are both syntactic operations that affect the basic structure of the sentence which is Subject-Object-Verb. While the passive construction yields an Object-Verb structure, the deletion of the internal argument yields a Subject-Verb structure.

Abbreviations

-	affix
=	clitic
1, 3	1st person, 3rd person
AUX	auxiliary
CAUS	causative
DEF	definite article
F	feminine
FUT	future
M	masculine
NOM	nominative
PASS	passive
PFV	perfective
PL	plural
PN	personal name
PROG	progressive
PRT	particle
SCL	subject clitic
SG	singular

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