Abstract
According to the existing literatures on verbal morphology of agglutinating languages, there are morphological behaviors characterized by creation of new verb stems from existing roots by affixation of derivative morphemes to the roots. The affixes are referred to as verbal extensions. Verbal extensions have syntactic characteristics realized in verbal matrices of verbs they get attached to. This paper discusses the syntactic properties of Dholuo verbal extensions. The verbal extensions under investigation are the applicative, the locative, the reflexive, the reciprocal and the stative. Although studies exist on syntactic properties of Dholuo applicative, reciprocal and reflexive extensions, effects of these extensions on the argument structure of Dholuo verbs still need further inquiry. This paper therefore analyses syntactic characteristics of Dholuo applicative, reflexive and reciprocal extensions in addition to locative and stative extensions that are yet to be analyzed in Dholuo. Most of the data examined in this study was generated by two of the researchers who are themselves native speakers of Dholuo. In some instances however, consultations were made with other native speakers for cross-checking purposes.

Keywords: valence, in situ, local domain, argument and transitivity.

1. Introduction
Morphological behavior of Dholuo of which verbal extension constitute a part, makes it an agglutinating language. Verbal extensions in Dholuo show relations that are syntactically marked in isolating languages like English. The extensions are realized on verbs by suffixes. Verbal extensions usually alter the argument structure of their host verbs thereby changing valence of the verb as well (Benson, 1964; Mwangi, 2001). As observed by Waweru (2011), arguments introduced by verbal extensions have syntactic consequences. The extensions operate as independent functional categories (Baker, 1988; Katamba, 1993). In Dholuo, verbal extensions have a functional role of introducing arguments to the matrix of their host verbs. The arguments are assigned syntactic roles since they take syntactic positions in the verbal constructions. They also alter the valence of verbs.

In terms of their ability to alter the argument structure of a construction, Dholuo verbal extensions exist in three categories:

i. Valence/argument increasing extensions.
ii. Valence/argument maintaining extensions.
iii. Valence/argument decreasing extension.

This article gives a descriptive account of syntactic features of the five Dholuo verbal extensions. The article is organized into five sections: section 2 is the research methodology; section 3 looks at Dholuo argument increasing extensions; section 4 discusses Dholuo argument maintaining extensions; section 5 gives a description of Dholuo argument decreasing extension and section 6 is a summary to this article.

2. Research Methodology
A qualitative research design was used in this study. The design involved a description of observed patterns of morphemes in Dholuo verbs. Data examined in this study was generated by two of the researchers, native speakers of Dholuo. Consultations were also made with other native speakers for cross-checking purposes.

3. Argument Increasing Extensions in Dholuo
Argument or valence increasing extensions have the ability to increase the number of arguments a Dholuo verb subcategorizes for thus an increase in the valence of the verb. There are two verbal extensions in Dholuo that have syntactic characteristics of altering the argument structure of verbs they are affixed to by increasing the number of arguments of the verbs. These extensions are: the applicative and the locative.

3.1 The Applicative Extension
According to Marantz (1993), the applicative extension, refers to a verbal inflection that adds an extra object to

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1 Dholuo is a Western Nilotic language (Greenberg 1966:85). It is spoken by majority of the people living in Central, Southern and Northern parts of Nyanza, Kenya.
the argument structure of its host verb. The extra object argument is referred to as applied object (Payne, 1997). Shibatani (1996) describes the applicative extension as a valence increasing operation because of its syntactic characteristic of introducing a new argument to the argument structure of its host verb.

Dholuo applicative extension is marked by the morpheme -n which is attached to a verb immediately after the root or the indicative morpheme -o. The extension indicates that the action is applied on behalf of, towards or with regard to some object.

Syntactically, the applicative extension in Dholuo alters the argument structure of a Dholuo verb it is attached to by increasing the number of arguments of the verb. The introduced argument (the applied object argument) occurs post verbally after the applicative morpheme in the matrix of the host verb. Consider example (1) with a verb without the applicative extension.

1. o-goy-o-e
   3sgS-beat-IND-3sgO
   He/she/it beats him/her/it.

The verb ‘goyo’ (to beat) in example in (1) above is a monotransitive verb subcategorizing for two arguments: the subject argument ‘o’ and the direct object argument ‘e’. This gives the verb a valence of two.

The verb in example (1) above if extended with the applicative suffix, it can generate a construction shown in example (2).

2. o-goy-o-n-wa-e
   3sgS-beat-IND-APPL-1plO-3sgO
   He/she/it beats him/her/it for us.

The attachment of the applicative suffix to the verb, as seen in the example (2), introduces the additional argument ‘wa’ (us). The operation therefore increases the number of arguments of the verb from two in to three, as example (2) illustrates. As a result of the extension, the monotransitive verb ‘goyo’ changes to a ditransitive verb with two object arguments: the applied object argument ‘wa’ and the direct object argument ‘e’.

In Dholuo, the applicative operation has ability of changing a ditransitive verbal construction from a double object construction to a triple object one thus increasing the valence of the verb from three to four. Example (3) shows a ditransitive verbal construction without the applicative suffix.

3. u-se-miy-o-wa-gi
   2plS-perf-give-IND-1plO-3plO
   You have given us them.

The verb in the construction (3) above subcategorizes for the subject argument ‘u’ and two object arguments: the indirect object ‘wa’ and the direct object ‘gi’. In terms of valence, the verb is a tri-valent one. When the applicative suffix is introduced to the matrix of the verb in the example (3), an additional argument is introduced, as example (4) illustrates.

4. u-se-miy-o-n-e-wa-gi
   2plS-perf-give-IND-APPL-3sgO-1plO-3plO
   You have given them to him/her/it for us.

In the construction in example (4), the attachment of the applicative suffix to the stem of the host verb introduces an extra argument ‘e’ occupying the object position. The applicative extension syntactically changes the verb from a three valence verb to a four valence one. The applicative extension also has the ability of changing a Dholuo intransitive verb to a transitive one. When applicative morpheme is affixed to an intransitive verb, an applied object argument is introduced to the matrix of the verb. Example (5) shows an underived intransitive verbal construction.

5. wa-ndik-o_maber
   1plS-write-IND_well
   We are writing well.

The verb ‘ndiko’ (to write) in the example (5) above subcategorizes for one argument: the subject argument ‘wa’. A new argument is introduced upon the attachment of the applicative suffix to the verb in the construction in example (5), as shown in example (6).

6. gi-ndik-o-ne-gi_maber
   3plS-write-IND-APPL-3plO_well
   They are writing well for them.

As shown in the example (6), the attachment of the applicative suffix -n introduces the applied object argument ‘gi’ to the matrix of the intransitive host verb ‘ndiko’. The extended verb therefore hosts two arguments instead of one: the subject argument ‘wa’ and the applied object argument ‘gi’.

1 The vowel /e/ is epenthesized between the applicative suffix and the consonant /g/ to break up the consonant cluster to make the two consonants contrast and more distinct.
3.2 The Locative Extension

The Locative is a morphological category that denotes a place where an action takes place. Martin and Müller (2001) have classified the locative extension under types of applicative extension assigned the semantic role of locative. In his analysis of Gikuyu verbal extensions, Waweru (2011) classifies locative as one of the semantic roles of the Gikuyu applicative extension. In Dholuo, the locative occurs as an individual independent extension marked by the suffix -e which comes immediately after the indicative suffix -o in the verbal template.

The attachment of the locative suffix to a Dholuo verb syntactically extends the verb by introducing a locative argument marked by the derivative morpheme ‘e’ to the matrix of its host verb. Example (7) shows a monotransitive verbal construction before its extension with the locative suffix.

7.  o-se-mak-ø-e  
   3sgS-perf-catch-IND-3sgO  
   He/she/it has caught him/her/it.

The verb ‘mako’ (to catch) subcategorizes for two arguments: the subject argument ‘o’ and the direct object argument ‘e’. Based on its ability to host two arguments, the verb ‘mako’ is described as a monotransitive verb with a valence of two.

The attachment of the locative suffix -e to the verb in example (7), introduces a new argument to the matrix of the host verb thus increasing the number of arguments the verb subcategorizes for, as example (8) illustrates.

8.  o-se-mak-a-e-e  
   3sgS-perf-catch-IND-3sgO-LOC  
   He/she/it has caught him/her/it at/in a place.

As shown in the construction in example (8), the affixation of the locative suffix -e to the verb ‘mako’ (to catch) introduces a third argument to the matrix of the host verb. This increases the valence of the verb from two to three. The argument introduced is marked by the locative morpheme ‘e’.

When the locative extension occurs with a Dholuo ditransitive verb, the number of arguments the verb hosts increases from three to four hence a valence increase in that manner. Consider unextended ditransitive verbal construction in example (9).

9.  u-puonj-o-wa_ kwano  
   2plS-teach-IND-1plO_ Mathematics  
   You are teaching us Mathematics.

The construction in example (9) is a double object construction with the indirect object argument ‘wa’ and the direct object argument ‘kwano’.

A new argument, the locative argument, is introduced on affixation of the locative suffix to the verb in example (9) resulting into a construction shown in example (10).

10.  u-puonj-o-wa-e_ kwano  
     2plS-teach-IND-1plO-LOC_ Mathematics  
     You are teaching us Mathematics at/in a place.

The derived verb in example (10) subcategorizes for four arguments: the subject argument ‘u’, the direct object argument ‘kwano’, the indirect object argument ‘wa’ and the locative argument ‘e’.

As valence increasing operation, the locative extension also converts a Dholuo intransitive verb into a di-valent verb. Example (11) shows an intransitive verbal construction without the locative extension.

11.  i-lem-o_ mos  
     2sgS-pray-IND_ silently  
     You are silently praying.

In example (11), the intransitive verb ‘lemo’ (to pray) hosts only the subject argument ‘i’.

When the locative suffix is attached to the verb in example (11), a locative argument is introduced, as example (12) illustrates.

12.  i-lem-a-e_ mos  
     2sgS-pray-IND-LOC_ silently  
     You are praying silently in a place.

The attachment of the locative suffix to the verb ‘lemo’, adds the locative argument ‘e’ to the matrix of the verb. The number of arguments and the valence of the host verb increase from one to two.

4. Argument Maintaining Extensions in Dholuo

There are verbal extensions in Dholuo that have no effect on the number of arguments of verbs they are affixed to. A Dholuo monotransitive verb, for example, will retain its di-valent status before and after the attachment of an argument maintaining extension to it.

There are two verbal extensions of this nature in Dholuo. These extensions are namely reflexive and reciprocal. The two extensions have syntactic characteristics of introducing their respective arguments to the matrix of their host verbs. The introduction of the arguments to the verbs has no effect on the valence of these
verbs.

4.1 The Reflexive Extension

Reflexive and reciprocal extensions are sometimes given the same interpretation. According to Chomsky’s (1981) standard binding theory, reflexives and reciprocals are anaphors. The anaphoric nature of the two extensions shows uniformity in the syntactic operation of the extensions. The anaphor is the reflexive argument. The reflexive argument and its antecedent must agree in number, gender and person. Consider example (13) from English.

13. The child praised herself.

The anaphor ‘herself’ and the antecedent ‘the child’ have the same referent. They agree in terms of person (third person), gender (female) and number (singular). These facts render example (14) ungrammatical:

14. *They killed itself.

The sentence in example (14) is ungrammatical because the NP ‘they’ cannot take the antecedent (the anaphoric pronoun) ‘itself’ given that it is a plural subject.

The reflexive can also be expressed through a verbal affix. This is the case in Dholuo in which the reflexive is expressed by use of the verbal affix -r, as seen in example (15).

15. a-tuon-o-r-a _ chiemo

I deny myself food.

Reflexive is normally taken as valence or argument decreasing operation. For instance, Haspelmath and Müller (2001) argue that since the subject and the object participants are referentially identical in reflexive constructions, only one participant (the subject) is expressed. This is through the process described by the two as deobjectivisation. The reflexive deobjectivises a transitive verb by making the verb lose its object argument. Based on this argument, it is apparent that the reflexive extension is an argument decreasing operation.

In Dholuo, this extension has no effect on the valence of its host verb, it rather maintains it. The only syntactic alteration the reflexive extension causes in the structure of its host verb is that the extension introduces a reflexive argument (anaphor) to the matrix of the verb. The reflexive argument takes the position of the object. The reflexive extension can operate with both Dholuo monotransitive and ditransitive verbs as discussed below.

Dholuo monotransitive verbs subcategorize for two arguments: a subject argument and an object argument, as shown in example (16).

16. i-yany-o-wa

You are abusing us.

In the construction in example (16), the verb hosts two arguments: the subject argument ‘i’ and the object argument ‘wa’.

The attachment of the reflexive suffix to the verb in the construction (16) introduces a reflexive argument to the matrix of the host verb. Consider example (17).

17. i-yany-o-r-i

You are abusing yourself.

The verb in example (17) hosts two arguments: the subject argument ‘i’ and the reflexive argument ‘i’. The attachment of the reflexive extension to the verb ‘yanyo’ (to abuse) gives the verb a valence of two which is equal to that of the unextended verb in example (16) hence maintenance of the valence of the verb at two.

The attachment of the reflexive suffix to a Dholuo ditransitive verb changes the syntactic structure of the verb by introducing a reflexive argument which occupies the position of the indirect object. The number of arguments of the host verb is maintained at three: the subject, the reflexive and the direct object arguments. Example (18) shows a verbal construction with unextended ditransitive verb.

18. wa-se-chik-o-u_kony.

We have promised you help.

The ditransitive verb ‘chiko’ (to promise) hosts three arguments: the subject argument ‘wa’, the indirect object argument ‘u’ and the direct object argument ‘kony’.

The verb ‘chiko’ in example (18) can take a form shown in example (19) once extended with the reflexive suffix.

19. u-se-chik-o-r-u_kony

You have promised yourselves help.

The affixation of the reflexive suffix to the verb in the construction (19) introduces the reflexive argument ‘u’ hence a total number of three arguments namely the reflexive argument ‘u’, the direct object argument ‘kony’ and the subject argument ‘u’. This is equal to the number of arguments the ditransitive verb hosts before its
extension with the reflexive suffix -r. Reflexive extension does not operate with Dholuo intransitive verbs. In case a Dholuo intransitive verb is extended with the reflexive extension, the meaning of the host verb completely changes.

4.2 The Reciprocal Extension
Reciprocity is expressed in most languages in two forms: in the form of an anaphoric noun/pronoun and in the form of a verbal suffix. In isolating languages like English, the reciprocity is expressed by the use of anaphoric pronouns known as reciprocals. These reciprocals occur post-verbally, in the position of the object. Consider example (20).

20. We are beating each other.

The verb in sentence (20) hosts two arguments: the subject argument ‘we’ and the reciprocal argument ‘each other’.

In Dholuo, the reciprocal is expressed in form of the verbal suffix -r. A universal plural object marker ‘e’ is incorporated as a reciprocal argument in a Dholuo verb extended with the reciprocal suffix. The anaphor ‘e’ is given a reciprocal interpretation by the attached reciprocal suffix meaning ‘each other’ in English. Consider example (21).

21. u-her-o-r-e
   2plS-love-IND-REC-plO
   You love each other.

The reciprocal extension in Dholuo only occurs with plural subject prefixes because the antecedent has to be plural. This means that reciprocal in Dholuo cannot take the singular subject suffixes as do the reflexives since there will be no agreement in number with the anaphor. Consider examples (22a), (22b) and (22c).

22. (a)*a-many-o-r-e
   1sgS-search-IND-REC-plO
   (b)*i-many-o-r-e
   2sgS-search-IND-REC-plO
   (c)*o-many-o-r-e
   3sgS-search-IND-REC-plO

As previously discussed, the reciprocal in Dholuo cannot take the normal plural object suffixes as do the reflexive. This explains the ungrammaticality in the constructions in examples (23a) and (23b).

23. (a)*wa-kay-o-r-wa
   1sgS-bite-IND-REC-1plO
   (b)*gi-kay-o-r-gi
   3plS-bite-IND-REC-3plO

Omondi (1982) and Okoth (1997) analyze Dholuo reciprocal and the reflexive as one because they are marked by the same morpheme. However, we treat the reciprocal and the reflexive as different and separate extensions in this article because the reflexive in Dholuo occurs with all subject prefixes unlike the reciprocal which occurs with the plural subject prefixes.

Just like the reflexive, the reciprocal extension is an argument or valence maintaining operation. It therefore has no effect on the transitivity of Dholuo verbs since it introduces the reciprocal argument ‘e’ to the matrix of the host verb. The argument is assigned a position of the object.

The attachment of this suffix to a Dholuo monotransitive verb introduces a reciprocal argument to the matrix of the verb. Let us consider example (24).

24. wa-se-mul-o-r-e
   1plS-perf-touch-IND-REC-plO
   We have touched each other.

On affixation of the reciprocal suffix to the verb ‘mulo’ (to touch) as shown in the construction in example (24), the reciprocal argument ‘e’ is introduced to the verb. This gives the verb a valence of two with the two arguments: the subject argument ‘wa’ and the reciprocal argument ‘e’. This is equal to the number of arguments Dholuo monotransitive verbs host. Based on its syntactic behavior of maintaining the valence and the number of arguments of its host verb, the reciprocal extension is a valence maintaining operation in Dholuo.

The attachment of the reciprocal extension to a Dholuo ditransitive verb introduces the reciprocal argument ‘e’ which takes the position of the indirect object, as shown in example (25).

25. wa-penj-o-r-e_penjo
   2plS-ask-IND-REC-plO_question
   We ask each other question.

The reciprocal argument ‘e’, as shown in example (25), is appended to the verbal structure when the reciprocal
suffix -r is attached. The verb therefore hosts three arguments: the subject argument ‘wa’, the reciprocal argument ‘e’ and the direct object argument ‘penjo’. This is equal to the capacity of a Dholuo ditransitive verb. The reciprocal extension, just like the reflexive, does not work with Dholuo intransitive verbs. In case it gets affixed to the verb, the meaning of the host verb totally changes and the derived verb will no longer fall within the paradigm of the host verb.

5. Argument Reducing Extension in Dholuo

Argument reducing extension is a type of extension that has a syntactic effect of decreasing the number of arguments its host verb subcategorizes for. The reduction in the number of arguments of a Dholuo verb causes a decrease in the valence of the verb. In Dholuo, there is only one such type of extension referred to as stative or neuter extension.

5.1 The Stative Extension

The stative is a verbal suffix which derives a one participant clause from a basic, underived two participant clause (Sebastian, 2014). This extension alters the syntactic structure of a verb by decreasing the number of arguments the host verb subcategorizes for.

In Dholuo, the stative extension is marked by the morpheme -r. This suffix is attached to the verb root after the indicative ‘-o’ followed by a non-argumental object suffix. What distinguishes Dholuo stative extension from reciprocal and reflexive ones is that stative extension works only with Dholuo stative verbs-verbs describing a state of action. Consider example (26).

26. o-twanger-o-r-e
   3sgS-sew-IND-STV-3sgO
He/she/it is sewable.

In Dholuo the stative suffix derives a one participant clause from a basic underived two-participant clause. Therefore, in terms of argument structure, the result of stativisation is expected to be intransitive. It follows that neither an overt object nor an object marker should be possible in a stative construction. However, in Dholuo an object marker is present as example (26) shows. This object marker is non-argumental; it is obligatorily retained within the verbal structure only to define the scope of in situ. In situ is the local domain within which the object marker and the subject fall. Example (27) is a verbal construction of a monotransitive verb without the stative suffix attached.

27. a-se-cham-ø-e
   1sgS-perf-eat-IND-3sgO
I have eaten him/her/it.

The verb ‘chamo’ (to eat) in example (27) operates as a monotransitive verb. It hosts two arguments: the subject argument ‘a’ and the object argument ‘e’.

The affixation of the stative suffix -r to the verb ‘chamo’ in the construction (27), the subject argument ‘a’ is lost and the object argument ‘e’ moves to the subject position thus taking its subjective form ‘o’, as example (28) illustrates.

28. o-cham-o-r-e
   3sgS-eat-IND-STV-3sgO
He/she/it is edible.

As shown in the example (28), the monotransitive verb, ‘chamo’ changes to an intransitive one with an argument marking prefix ‘o’ once the stative suffix is attached to this verb.

Dholuo ditransitive verbs subcategorize for three arguments: the subject argument, the direct object argument and the indirect object argument, as shown in example (29).

29. wa-ng'iso-o-i-e
   1plS-show-IND-3sgO-2sgO
We are showing it to you.

The verb ‘ng’iso’ (to show) in example (29) hosts three arguments: the subject argument ‘wa’, the direct object argument ‘e’ and the indirect object argument ‘i’.

The Attachment of the stative suffix to a Dholuo ditransitive verb like the one in example (29) alters the syntactic structure of the verb by reducing the number of arguments from three to one. Consider example (30).

30. o-ng'iso-o-r-e
   3sgS-show-IND-STV-3sgO
It is showing.

The attachment of the stative suffix to the host verb in the example in (29) introduces the stative argument ‘o’ which is the only argumental affix in the construction. This changes the verb to a mono-valent verb.

The stative extension does not operate with Dholuo intransitive verbs since these verbs have no object arguments to attain the subjective state upon the extension of the verbs with the stative suffix.
6. Conclusion
This article discussed syntactic structure of Dholuo verbal extensions. Syntactic structure of Dholuo verbal extensions is described in terms of the number of arguments a host verb subcategorizes for.

The applicative and the locative extensions introduce new arguments whenever affixed to Dholuo verbs. The introduction of these arguments to a verb alters syntax of the verbal structure by increasing the number of arguments and valence of the verb by one. In this way, when the applicative and the locative occur with intransitive verbs, the number of arguments of the intransitives increases from one to two: the subject and the applicative or the locative argument. Monotransitive verbs subcategorize for three arguments instead of two upon the attachment of the extensions to the verbs. These arguments are: the subject, the object and an applicative or locative argument. On attachment of these extensions to Dholuo ditransitive verbs, the number of argument increases from three to four namely the subject argument, the direct object and the indirect object arguments and an applicative or locative argument.

Dholuo reflexive and reciprocal extensions have syntactic characteristics of maintaining the number of arguments of their host verbs. For instance, when these extensions occur with a monotransitive verb, the number of arguments is maintained at two: the subject argument and a reflexive or reciprocal argument. When they occur with a ditransitive verb, the valence and the number of arguments of the verb is maintained at three: the subject argument, the direct object argument and the reflexive or the reciprocal argument which take the position of the indirect object argument. The two extensions do not operate with Dholuo intransitive verbs.

Dholuo stative extension syntactically reduces the number of arguments of its host verb. For example, when a Dholuo monotransitive verb is extended with the stative suffix, the number of arguments of the verb is reduced from two to one. In other words, the verb is detransitivised by the extension. The same syntactic change is observed in Dholuo ditransitive verbs. A Dholuo ditransitive verb extended with the stative suffix changes to an intransitive verb. An object morpheme retained after an affixation of the stative suffix to a Dholuo verb operates as a non argumental suffix. The purpose of the object morpheme is to define the scope of in situ.

References