The Structure of the Iraqw Noun Phrase

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The Structure of the Iraqw Noun Phrase

Chrispina Alphonce, The University of Dodoma, chrisalpho333@gmail.com

The structure of the noun phrase (NP) is demonstrated to differ among languages. Albeit studies that paid attention on Southern Cushitic languages in general and Iraqw in particular, their contribution is selective to the general grammar of the language while the structure of the NP is scarcely described. This study contributes to the description of the language through an empirical explanation of the elements and the morphosyntactic properties of the NP in the language. It describes the orders of the elements, their co-occurrence, and constraints to illuminate the structure of the NP of the language. It draws on the data collected through elicitation and text collection. The qualitative analysis of the data obtained revealed that Iraqw NP demonstrates four different peculiar characteristics (i) the Iraqw NP is constituted of the head noun with or without dependents. The dependents of the NP are possessives, demonstratives, indefinite markers, the distributive determiner, adjectives, quantifiers, numerals, genitive constructions, and relative clauses. The dependents follow the head noun, except the distributive determiner, which precedes the head noun. (ii) The attested order of the dependents is N> [Poss>Dem/Indef]> [Gen>Adj>Num/Quant]> [Rel]. (iii) Possessive, demonstrative, and indefinite markers are non-lexical words that occur immediately after the head noun. (iv) In spontaneous speech, the NP with up to three dependents is preferred.

Key Words: noun phrase; noun dependents; order of dependents; Iraqw


1 Introduction

The structure of Noun Phrases (NPs) has become central in cross-linguistic research. Scholars who have conducted research on indigenous languages have observed remarkable variation in the structure of NPs, even when comparing genetically related languages (e.g. Rugemalira 2007). This difference among individual languages calls for systematic analysis of each individual language. However, the literature lacks deep analyses of the structure of NPs of Southern Cushitic languages; the Iraqw NP is one of the least described. Though Mous (1993) described the structure of Iraqw NPs, the morphosyntactic characteristics of the NPs did not receive the required attention. Thus, this article is a detailed analysis of Iraqw NPs and the morphosyntactic properties of the noun dependents. It describes the order of elements, their co-occurrence possibilities, and constraints. It makes a contribution to the comparative syntax of the NP of the wider Cushitic language family.

2 Background to the Study

The literature has generally defined the head of the NP as a noun, which is usually surrounded by more than one element (Watters 2000; Carnie 2002; Richard et al. 1992; Aboh 2010). Some scholars have added that NPs could be made up of bare nouns (Aboh 2010; Wang & Liu 2007) without any functional elements, such as determiners, classifiers or number morphemes. The literature goes further by emphasizing the differences in the elements that form an NP among languages (Dryer 2006; Rijkhoff 2002; Givón 2001; Mous 1993; Tang 1999; Wintner 2000; Rugemalira 2007; Lusekelo 2009). These elements are possessives, demonstratives, adjectives, numerals, relative clauses, associative constructions, intensifiers, and interrogatives. They appear
either before or after the head noun (Cinque 2000; Dryer 2006), or both before and after the head noun (Bendjaballah & Hofherr 2001; Lusekelo 2009). Thus, within and across languages, NPs vary with respect to their internal organization and complexity (Bendjaballah & Hofherr 2001; Rijkhoff 2002).

Furthermore, the literature demonstrates variation in the order of NP elements among different languages of the world. Languages reveal a distinctive order of NP elements, even within genetically related languages. English, French and Vietnamese have the order Mod > N > Mod (Tang, 1999). There is a chorus of researchers who have attempted to describe NPs in Bantu languages. The studies have generally arranged the head noun and its dependents in the sequence N > Mod (Rugemalira 2007; Lusekelo 2009). Similarly, Kwa NPs (Aboh 2010) and Thai languages (Tang 1999) display N > Mod order. However, in some Bantu languages, the demonstratives may precede or follow the head noun (Kiswahili G42, Mbugwe F34); yet in some others (Kiswahili) the distributive determiner precedes the head noun (Rugemalira 2007; Lusekelo 2009). Conversely, in Chinese, Korean and Japanese NPs, the head noun follows its dependents (Tang 1999; Wang & Liu 2007).

In Afro-Asiatic languages, the literature shows remarkable variation in the structure of NPs (Mous 2012). Bendjaballah and Hofherr (2001) reveal that Somali, Harar Oromo and Iraqw have postnominal modification, while the Afar language shows prenominal modification and Beja exhibits both prenominal and postnominal modification. Like the Afar language, Amharic displays prenominal order of modifiers (Adafre 2004). Resembling Beja, Arabic (Fassi Fehri 1999) and Hebrew (Wintner 2000) exhibit both prenominal and postnominal modification. Such NP structures can be visualised as Mod > N > Mod, Mod > N and N > Mod. Some languages have rigid patterns, while others have flexible orders. For instance, Somali has a free order of modifiers, while Harar Oromo, Beja, Iraqw, and Afar are said to have a strict order of modifiers (Bendjaballah & Hofherr 2001).

Linguists partition elements of the NP into determiners and modifiers based on their morphosyntactic properties. Syntactically, determiners in European languages (Givón 2001; Rijkhoff 2002; Dryer 2007) occur before head nouns while modifiers tend to occur after determiners, and they give further description of the head noun. In Bantu, determiners occur immediately after the head noun, followed by modifiers, and the final position is occupied by intensifiers or relative clauses (Rugemalira 2007; Lusekelo 2009). Rugemalira (2007) adds that interrogative words which seek further specification of the head noun occupy the edge position. Morphologically, Obiamalu (2013) observes that in some languages, the determiner exists in the form of an independent lexical item (English, French), while in others, it appears in the form of an affix or clitic attached to the noun (Amharic) and yet in many other languages, it appears as a null constituent of a nominal phrase (Igbo). This means that the morphology of determiners varies within and across languages.

The literature illustrates that Cushitic languages, namely, Somali, Arbore, Konso, and Dime have an overt definite affix (Adafre 2004; Paster 2006; Gabbard 2010; Mulugeta 2013). Conversely, the determiner in Iraqw is covertly realized by the demonstrative and/or the possessive (Mous 2012) or by phi-feature in Tigrinya (Tajebe 2003). In Arbore and Konso, both the definite marker and the demonstrative co-exist (Mous 2012). In the languages investigated, determiners are non-lexical words or suffixes/enclitics attached to the head noun (Beermann & Binyan 2007; Gabbard 2010; Mous 2012). Therefore, the determiner varies across languages in terms of forms and functions.
Since the structure of the Iraqw NP is scantly described (cf. Mous 1993; 2012), this article enriches the existing literature by investigating Iraqw NPs to identify the elements of the NP and their morphosyntactic properties. It also examined the order of elements together with their co-occurrence possibilities and constraints. This article answers some questions about the noun dependents that form the Iraqw NP and the morphological and syntactic properties of the elements that surround the head noun in the Iraqw NP and the order in which such elements occur. Further, the article informs of the co-occurrence possibilities and restrictions.

3 Sources of Data

The article draws from fieldwork data that I collected through elicitation and text collection. The fieldwork was conducted in Mbulu district in Tanzania. This area is believed to be the indigenous territory of the Iraqw speaking community. Although the Iraqw people also live in Babati, Karatu and Hanang’w districts, but Mbulu District has had limited interaction from other language-speaking communities. This helped to obtain data from speakers who use their mother tongue frequently, which in turn increased the chance for data relevant to this paper.

Data were collected through elicitation and text collection. Elicitation involved 8 (4 male and 4 female) informants who were selected by using snowball sampling technique. 4 informants live in Kweramusl village and others 4 live in Hhayloto village in Mbulu. In the text collection, tokens of sentences with NP expressions were randomly collected from spoken sources, such as conversations, narrations, and stories. Other tokens were extracted from written sources, namely Iraqw grammars (Mous 1993; Nordbustand 1985), Iraqw texts (Kiesling 1998), Bibliá ar Tsifirír Iraqw ‘Iraqw Bible’ (2003) and an Iraqw dictionary (Mous et al 2002). Thus, in the analysis and presentation of the findings, reference is drawn from both original fieldwork data and secondary data. Where reference is made to the secondary data, the appropriate source is shown. The selection of the written sources was determined by their availability; since the language is not well described, few published and unpublished syntactic materials were used. In the course of extracting the data, the focus was on structures with NP expressions.

Therefore, to help the readers of this article be able to appreciate and understand the data that are presented I found it necessary to highlight a summary of the Iraqw phonological and orthographic system as indicated in consonant and vowel charts below.

<table>
<thead>
<tr>
<th></th>
<th>u</th>
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<tr>
<td>a</td>
<td>aa</td>
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</table>

**Figure 1: Vowel chart**

Iraqw has five vowels which can be short or long. Long vowels in this article are indicated by doubling the letter.
The Structure of the Iraqw Noun Phrase

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Rounded Velar</th>
<th>Uvular</th>
<th>Rounded uvular</th>
<th>Pharyngeal</th>
<th>Glottal</th>
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<tbody>
<tr>
<td><strong>Stops</strong></td>
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<td>d</td>
<td>j</td>
<td>tʃ</td>
<td>g</td>
<td>k, g^w</td>
<td>q</td>
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<td><strong>Nasals</strong></td>
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<td><strong>Fricative</strong></td>
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<td><strong>Affricate</strong></td>
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<td><strong>Affricate</strong></td>
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<td><strong>Glide</strong></td>
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</tr>
</tbody>
</table>

Figure 2: Consonant Chart

Most consonants are pronounced as they are written, except $ch = [tʃ], j = [ʃ], hh = [h], / = [ʕ], ˈ = [ʔ], ny = [ɲ], ng = [ŋ], ng^w = [ŋ^w], sl = [l], sh = [ʃ], y = [j]$ and $tl = [tɫ]$.

4 Findings

The Iraqw NP is headed by the noun, or by substitute forms. The head noun either occurs in isolation, thus forming a bare NP or surrounded by a string of satellites. My data also attested nine noun dependents, namely, possessives, demonstratives, indefinite markers, numerals, adjectives, quantifiers, relative clauses, the distributive determiner and genitive constructions. Each element displays distinctive morphosyntactic features and hence partitioned into determiners and modifiers (see below for discussion). Determiners include possessives, demonstratives, indefinite markers, and the distributive determiner, while numerals, adjectives, relative clauses, quantifiers and genitive constructions form the modifier category. Noun dependents in Iraqw are post-head with the frequent exception of the distributive determiner which appear before the head noun. Based on typological perspectives, the Iraqw NP displays N>MOD which is similar to some Bantu languages (cf. Rugemalira 2007; Lusekelo 2009), Somali, Harar and Oromo (Bendjaballah & Hofherr 2001), Kwa (Aboh 2010), and Thai languages (Tang 1999). Ordering of noun dependents is subject to the co-occurrence possibilities constraints. Subsequent sections present morphosyntactic features, the order of dependents and their co-occurrence possibilities.

4.1 Headword of the Iraqw NP

The head of the Iraqw NP is the noun, or its substitute forms. Common nouns in their bare forms have grammatical gender distinction in terms of their agreement with verbs. Nouns are categorized into masculine, feminine and neuter genders.

Bare nouns function as headwords in NPs; hence I refer to this construction (1) bare NPs.
1) dasi i hurin
girl:F S.3:PRES cook:3.SG
‘A girl is cooking.’

In (1), a noun *dasi* ‘a girl’ stands in isolation forming a bare NP. It can be substituted by a third personal singular pronoun *inós* ‘she’.

Nouns also form the nucleus of a phrase containing one or more peripheral elements. These elements are categorized as determiners and modifiers. Determiners are bound forms which appear to occur closer to the head noun, while modifiers occur after determiners. The head nouns followed by modifiers take a construct case suffix. The construct case suffix is a special morphological form taken by a noun when it precedes modifiers like adjectives and relative clause. This suffix is realized by a high tone placed on the final vowel of the noun. This article used the construct case suffix as one of the mechanisms of distinguishing determiners and modifiers in Iraqw. Consider the examples below.

2) na/aay-ˈḗ ˈkudá’
child:M-1.SG-POSS INDEP.M/N-DEM4
‘that child of mine…’

3) na/oó niíná
child:M.CON small:M.SG
‘a small child…’

In (2), the head noun *na/aay* ‘a child’ precedes the possessive *ˈḗ* ‘my’ and the demonstrative *ˈkudá’* ‘that’ and it is not marked with a construct case suffix. However, in (3), the head noun is in construct form *na/oó*, because it precedes the adjective *niíná* ‘little/small’.

### 4.2 Determiner Categories of Noun Dependents

Determiners are bound words that occur adjacent to the head noun. They consist of possessives, demonstratives, and indefinite markers. As determiners occur adjacent to the head noun, they are significant elements. This concurs with the ‘The Head Proximity Principle’ ((Rijkhoff 1986) which suggests that significant elements tend to occur adjacent to the head noun. Besides, determiners being in affix form, syntactically they occur closer to their host which is the head noun. Three word categories competing for the determiner position are possessives, demonstratives, and indefinite markers.

#### 4.2.1 Possessives

In Iraqw, possessives surface as suffixes and independent forms. Possessives occur in the position immediately after the head noun because they significantly denote the state ownership of the referent. Presented in (4 & 6) are inventories of the Iraqw possessive suffixes and their independent forms as in example (4, 6, 8, and 9) which were taken from Mous (1993). However, the example sentences provided were collected from the field.
4) a. `ee
doe`ee
house:M-1.SG-POSS
‘my house…’

b. -rén/-tén
do-tén
house:M-1.PL-POSS
‘our house…’

c. -ók
do-ók
house:M-2.SG-POSS
‘your house…’

d. -húng
do-húng
house:M-2.PL-POSS
‘your house…’

e. -ós
do-ós
house:M-3.SG-POSS
‘his/her/its house…’

f. -ín
do-in
house:M-3.PL-POSS
‘their house…’

In (4), possessive suffixes occur immediately after the head noun. They can be preceded by neither demonstratives nor indefinite markers. In (5a), the head noun kitangw ‘chair’ is followed by a possessive suffix -g-ók ‘yours’, whereby -g- is a linker and the demonstrative suffix -síng ‘that’ follows, in the order N>POSS>DEM>. The reverse order N>DEM>POSS> in (5b) is unacceptable. The linker in a morpheme which obligatorily occurs on any noun with reference, but goes unpronounced when it occurs at the right edge of a phonological phrase (cf. Harvey, 2018).

5) a. kitangw-g-ók-síng
chair:M/F-2.SG-POSS-DEM2
‘that chair of yours…’

b. *kitangw-síng-gók
chair:M/F-DEM2-2.SG-POSS
‘your that chair’

In (6), I list independent possessive forms formed by attaching possessive suffixes to the independent noun ko- for masculine and neuter nouns and to to- for feminine nouns.

6)  

<table>
<thead>
<tr>
<th>M/N</th>
<th>F</th>
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<tbody>
<tr>
<td>kwe`eé'</td>
<td>te`eé'</td>
</tr>
<tr>
<td>kók</td>
<td>tók</td>
</tr>
<tr>
<td>kós</td>
<td>tós</td>
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<tr>
<td>korén</td>
<td>torén</td>
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<tr>
<td>kohúng</td>
<td>tohúng</td>
</tr>
<tr>
<td>koin</td>
<td>toin</td>
</tr>
</tbody>
</table>
Independent possessives differ with respect to gender. They inherently designate gender. In spontaneous speech, independent forms hardly follow the head noun that possessive suffixes; and they do not co-occur with either demonstratives or indefinite markers. For instance, the construction (7) is an unusual.

7) ?kitangw kôk-sîng
   chair:M/F-2.SG-INDEP/M-POSS-DEM2
   ‘that chair of yours…’

In the order of occurrence, possessives are never preceded by either demonstratives or indefinite markers. Possessive suffixes tend to occur immediately after head nouns, a position which is suggested to be occupied by higher elements (Rijkhoff 1986) than other determiners or modifiers. Possessives occur closer to the head noun once a series of elements are stringed around the nucleus.

4.2.2 Demonstratives

Demonstratives are deictic forms (Givón 2001:6) used to indicate proximity or non-proximity of the location of the referent in relation to the speaker’s and hearer’s position (Dryer 2007:162-163). Lusekelo (2009:10) adds that demonstratives indicate referentiality in languages; i.e. the entities mentioned earlier in the text can be referred to by demonstratives.

Demonstratives in Iraqw distinguish four degrees of proximity, indicated in (8): the common proximal -í/-ká’ is used for referents that are close to the speaker; the non-proximal -sîng refers to referents close to the addressee; the demonstrative -qá’ ‘that-yonder’ is used for referents remote to both the speaker and the hearer, but visible; and the distal demonstrative -dá’ ‘that-yonder’ used for referents that are remote to both the speaker and the hearer but not visible (it is distant and out of view). Also, it is used for discourse purpose as well as spatial reference.

8) a. -í   DEM1  do’-w-i
       house:M-DEM1
       ‘this house…’

     b. -ká’ DEM1  hikwa-ká
                  cows:N-DEM1
                  ‘these cows…’

     c. -sîng DEM2  do’-sîng
                    house:M-DEM2
                    ‘that house…’

     d. -qá’ DEM3  dó-qá’
                   house:M-DEM3
                   ‘that house…’
The Structure of the Iraqw Noun Phrase

In (8), the common proximal demonstrative has two forms, -í and -ká’. The suffix -í is used for both masculine and feminine while its allomorph -ká’ is used for neuter.

In addition, demonstratives surface as independent forms indicated in (9).

9) Masculine  Feminine  Neuter
kwí  tì  ‘this one’  kuská’ ‘these’
kwisíng  tísíng  kusíng ‘that’
kuqá’  tiqá’  kuqá’ ‘that’
kudá’  tidá’  kudá’ ‘that’

Unlike demonstrative suffixes, independent demonstratives inherently distinguish gender, as indicated in (9). They are formed by attaching the demonstrative suffixes to ku for masculine and neuter nouns and to ta- for feminine nouns (cf. Mous, 1993). (Note that /u/ becomes /w/ between /k/ and /i/.)

Functionally, qá’ and -dá’ are often used for nouns mentioned earlier; hence, they mark definiteness. They also signal TAM specifics: -qá’ for present tense (10), and -dá’ for past and known referents (11).

10) dasi-r-qá’  i  tiq
 girl:F-DEM3  S.3  ill:3.SG.F
 ‘That girl is sick.’

11) aa  kii/  bará  qaymo-dá’
 S.3:PERF  return:3.SG.M  in:CON  field:F-DEM4
 ‘He returned to the field.’

Morphologically, -qá’ and -dá’ can be reduplicated, yielding -qá-qá’ and -da-dá’ as in (12) and (13). The reduplicated form indicates the intensity of the definiteness in the present and past, respectively.

12) núk-qá-qa’  i-na  daqariit
 people:M-DEM3-DEM3  S.3-PAST  become:rich:3.SG.M:PAST
 ‘Those people have become rich.’

13) ma/andu-dá-dá’  naa  ani  haníś  i  tsuu’
 fruits:M-DEM4-DEM4  HIT:PAST1.SG:DIR 1.SG  give:2.SG  S.3  be: nice:3.SG.F
 ‘The fruits that you gave me are nice.’

Although -qá’ and -dá’ refer to a referent that is far from both the speaker and the hearer, they differ in terms of proximity or vicinity. The former suffix is used to refer to a referent that in the vicinity of both the speaker and the hearer while the latter refers a referent that is not visible to either.
Demonstratives can occur immediately after the head noun in the order N>DEM>. But when they co-occur with possessives, they occupy the position immediately after the possessives, as illustrated below.

14) dasii-sing  
girl:F-DEM2  
‘that girl…’

15) a.  
dasi-r-ˈeé’-sing  
girl:F-1.SG-POSS-DEM2  
‘that girl of mine…’

b. *dasii-síng-ˈeé’  
girl:F-DEM2-1.SG-POSS  
‘that girl of mine…’

In (15a), -síng ‘that’ follows the possessive suffix ‘eé’ ‘my’ giving N>POSS>DEM> order; the opposite order N>DEM>POSS> in (15b) is ungrammatical. This clearly indicates that demonstratives never appear before possessives.

Additionally, demonstratives are in complementary distribution with indefinite markers because they are semantically incompatible. Thus, definite and indefinite readings cannot be expressed in a single NP.

4.2.3 Indefinite Markers

Another set of determiners in complementary distribution with demonstratives is indefinite markers. Indefiniteness is realized by three suffixes and their counterpart independent forms in (16).

16) a.  
Suffixes

-ko M  
garma-ko  
boy:M-INDEF.M  
‘a boy/a certain boy…’

-ka F  
/ameni-r-ka  
woman:F-INDEF.F  
‘a woman/a certain woman…’

- kaariya’ N  
na/ii-kaariya’  
children:N-INDEF.N  
‘children/certain children…’

b.  
Independent forms

kooko M  
garma-ˈeé’  
boy:M-1.SG-POSS INDEF.M/N-INDEF:M  
‘a certain boy of mine…’

tooka F  
/ameni-r-ós  
woman:F-3.SG-POSS INDEF.F:INDEF:F  
‘a certain woman of his…’

kookariya’ N  
na/ii-w-ós  
children:N-1.SG-POSS INDEF.M/N:INDEF:N  
‘certain children of his…’

Independent indefinite markers are formed by combination of the independent noun suffixes and indefinite suffixes as in (16b). It should be noted that both suffixes and independent forms
distinguish gender. Syntactically, indefinite markers can occur immediately after the head as in *na/i-kaa*riya ‘certain children…’ (See 16a), giving the order N>INDEF>.

Indefinite markers appear after the possessives, in the order N>POSS>INDEF>… in (17a); the opposite order N>INDEF>POSS>… is ungrammatical, as in (17b).

17) a. garma-ˈé’ kooko
    boy:M-1.SG-POSS INDEP.M/N-INDEF:M ‘a certain boy of mine…’

b. *garma- kooko- ˈé’
    boy:M- INDEP.M/N-INDEF:M-1.SG-POSS ‘a certain boy of mine…’

Indefinite markers are in complementary distribution with demonstratives. This is because indefiniteness and definiteness readings cannot be expressed in a single NP. If this happens, then the construction will be ill formed as show in (18) below.

18) *garma- kooko-síng
    boy:M- INDEP.M/N-INDEF:M-2DEM ‘a certain boy of mine…’

Possessives, demonstratives and indefinite markers are true determiners, because as suffixes, they occur closer to the head noun.

4.3 Categories in the Modifier Position

In Iraqw, the term ‘modifier’ is used to embrace lexical words, phrases as well as clauses (as is also the case in other languages, like Kiswahili and English), which occur beyond the determiner slot. Attested modifiers include quantifiers, genitive constructions, numerals, adjectives and relative clauses.

4.3.1 Quantifiers

Quantifiers express indefinite quantity and function to indicate indefiniteness of the head noun. The data attested the following lexical items functioning as quantifiers in Iraqw:

19) sleemeero ‘all, whole’
    niina ‘few/little’
    yariir ‘many, much’
    ur ‘many’
    bahhale ‘some’
    hhawaˈaka ‘several, some’

Syntactically, quantifiers follow the head noun. In (20) and (21), quantifiers are sleemeero ‘all’ and yariir ‘many’ respectively.
20) xooro sleemeero
   people:F all
   ‘all the people…’

21) muk-rén oo yariir
    people:M-1.PL-POSS INDEP.CON.M many
    ‘many of our people…’

Quantifiers differ from numerals in that quantifiers are indefinite and do not specify an exact quantity of the head noun. In that case, they never co-occur with numerals.

4.3.2 Numerals

Numerals express absolute quantity of the head noun they follow. Numerals distinguish gender and tonal features. Low numerals (1-9) are feminine and bear high tone, whereas base ten numbers, e.g. 10, 100 and 1,000 are masculine and bear low tone. However, borrowed numerals 1000,000 and 1,000,000s are feminine and bear low tone (22).

22) Cardinal and Ordinal Numerals

<table>
<thead>
<tr>
<th>Figures</th>
<th>Cardinals</th>
<th>Gloss</th>
<th>Ordinal</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>wák:F</td>
<td>one</td>
<td>heé geera</td>
<td>first</td>
</tr>
<tr>
<td>2</td>
<td>tsár:F</td>
<td>two</td>
<td>heé tsár</td>
<td>second</td>
</tr>
<tr>
<td>3</td>
<td>tám:F</td>
<td>three</td>
<td>heé tám</td>
<td>third</td>
</tr>
<tr>
<td>4</td>
<td>tsiyáhh:F</td>
<td>four</td>
<td>heé tsiyáhh</td>
<td>fourth</td>
</tr>
<tr>
<td>5</td>
<td>koo ‘án:F</td>
<td>five</td>
<td>heé koo ‘án</td>
<td>fifth</td>
</tr>
<tr>
<td>6</td>
<td>lahhoó:F</td>
<td>six</td>
<td>heé lahhoó</td>
<td>sixth</td>
</tr>
<tr>
<td>7</td>
<td>faángw:F</td>
<td>seven</td>
<td>heé faángw</td>
<td>seventh</td>
</tr>
<tr>
<td>8</td>
<td>dakaát:F</td>
<td>eight</td>
<td>heé dakaát</td>
<td>eight</td>
</tr>
<tr>
<td>9</td>
<td>gwaleél:F</td>
<td>Nine</td>
<td>heé gwaleél</td>
<td>ninth</td>
</tr>
<tr>
<td>10</td>
<td>mibang’w:M</td>
<td>Ten</td>
<td>heé mibang’w</td>
<td>tenth</td>
</tr>
<tr>
<td>100</td>
<td>tsíru:M</td>
<td>a hundred</td>
<td>heé tsíru</td>
<td>hundredth</td>
</tr>
<tr>
<td>1,000</td>
<td>kuma:M</td>
<td>a thousand</td>
<td>heé kuma</td>
<td>thousandth</td>
</tr>
<tr>
<td>100,000</td>
<td>laaki:F</td>
<td>one hundred thousand</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1,000,000</td>
<td>milioni:F</td>
<td>one million</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

In NPs, numerals follow the head noun. They display freedom of occurrence. Numerals can interchange position with adjectives in the orders N>ADJ>NUM>/ N>NUM>ADJ> as in (23 & 24).

23) hhadaá ninakw tám
    stick:N.CON small:PL three:F
    ‘three small sticks…’
4.3.3 Adjectives

Adjectives are words that describe the quality or attributes of nouns. They express more information about the noun’s physical property, dimension, size, colour, value, speed, etc. This article dealt with descriptive adjectives that reflect the properties similar to those discussed in Dixon (2004); namely dimension, age, value, colour, physical properties, human propensity, speed, difficulty and similarity. Below are some of the Iraqw adjectives.

25) niina ‘small, little, young’
tleer ‘long, tall’
/aben ‘new, latest’
gawid ‘hard, difficult, tough’
hheer ‘insufficient’

Adjectives in Iraqw have both singular and plural forms. Most adjectives have regular plural forms but some have irregular plurals. Regular suffixes which are used to form plural adjectives are those such as -en/-iyen (26), -et/-ed (27) and -t (28).

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>26) maparí-r ur</td>
<td>maperaá uren</td>
</tr>
<tr>
<td>‘a big ditch…’</td>
<td>‘big ditches…’</td>
</tr>
<tr>
<td>27) uhumoó tleér</td>
<td>uhemaá tlet/tled</td>
</tr>
<tr>
<td>‘a long pillar…’</td>
<td>‘long pillars…’</td>
</tr>
<tr>
<td>28) hhutlmoó ququmaár</td>
<td>hhutleemaá ququmat</td>
</tr>
<tr>
<td>‘a short string…’</td>
<td>‘short strings…’</td>
</tr>
</tbody>
</table>

Also, plurals can be formed by the shortening of vowel as indicated below.


In (29), the singular form is hhoˈ ‘nice’ with a long vowel but the plural hhoˈ has a short vowel. Other examples are heé tlaákw ‘a bad/evil person’ and múk tlaákw ‘bad/evil persons’. Some adjectives have irregular plural forms. Adjectives like /aben ‘new’ and qaren ‘old’ are used to modify both singular and plural head nouns.
Adjectives occur in the modifier slot after the head nouns they modify. They postmodify head nouns whereby heads take the construct case suffix marked by a high tone as in (29).

Adjectives agree in gender and number with the head nouns they qualify. Gender agreement is tonally realized and number agreement is based on the shape of adjectives. Adjectives modifying masculine head nouns bear high tone while those modifying neuter and feminine head nouns take a low tone as shown below.

31) doó /abén
   house:M.CON  new:M.SG
   ‘a new house…’

32) qatnir /aben
    bed:F.CON      new:F.SG
    ‘a new bed…’

33) maraá /aben
    house:N.CON    new:N.SG
    ‘new houses…’

In (31), /abén ‘new’ modifies a masculine noun hence bears high tone while in (32) and (33), /aben ‘new’ bears a low tone since it modifies feminine and neuter nouns.

Additionally, adjectives agree in number features with the head noun they attribute. Since adjectives agree in number and gender features with head nouns, they show singularity, plurality, masculinity, femininity, and neutrality.

4.3.4 Relative Clauses

Depending on the linear position in which a relativized head noun appears, relative clauses are categorized as postnominal (a relative clause follow the head-noun), prenominal (relative clause precedes the head-noun), correlative (head-noun is adjoined to a matrix clause), and circumnominal (head-noun appears within the relative clause) relative clauses (de Vries 2002; Hiraiwa 2003, 2009; Comrie & Kuteva 2005; Cinque 2005).

Iraqw exhibits postnominal relatives, whereby relative clauses invariably occur to the right of the head noun.

34) leei a qwat
    goat:F  S.3  lose.3.SG.PAST
    ‘the goat was lost…’

35) leei-dá’ a qwat
    goat:F-REL S.3  lose.3.SG.PAST
    ‘the goat which was lost…’
Represented in (34) is the declarative sentence and (35) is the relative clause whereby the head noun appears to the left of the relative clause and bears the suffix -dá’ as a relativizer (relative marker).

Relative clauses are placed to the final edge of the NP because of the heavy weight or new information they contain than affixes (e.g. possessives, demonstratives suffixes) and shorter dependents (like adjective, quantifiers) of the NP (Firbas, 1996; & Rijkhoff, 2002). Rijkhoff asserts that the weight of relative clauses do not allow to precede dependents made of suffixes or one word. Thus, appearing to the edge of the NP satisfies pragmatic constraints favouring the given-new ordering of information (Firbas, 1996). In (36), the relative clause na qwariir ‘have lost’ is preceded by the possessive suffix ‘éé’ ‘my’, independent demonstrative kudá ‘that’ and a numeral koo’án ‘five’.

36) hikwa-‘éé’ kudá koo’án na qwariir
cows:F-1.SG.POSS INDEP.M/N-REL five:F S.3:PERF lose:3.PL.PAST
‘those five cows of mine that have lost…’

Basic morphological and phonological marking of relative clauses exists in Iraqw. Typically, speakers use overt, i.e. segmental markers, namely, demonstrative suffixes, independent demonstrative forms (-ú-ká’, -sing, -qá’ and –dá’) and independent construct case suffix (oo for masculine, ar for feminine and awa for neuter nouns) and the construct case suffix marked by a high tone on the head noun’s final vowel as presented below.

37) doslutmoo-qá’ kurmoó koóm i kakaanír áy
farmer:M-REL hoe:M.CON have:1.SG S.3 weed:F.CON go:1.SG.PRESS
‘the farmer who has the hoe is going to weed’

38) /ameeni-r migirú daahh i lootin
woman:F-REL collect:firewood come:from S.3 milk:1.SG.PRESS
‘A woman who came from collecting firewood is milking.’

39) loohi ar hikwa ir warhaahhatír a hhitirut
path:F REL cattle:N O.N-INSTR pass<HAB>:3.PL COP destroy:1.SG
‘The path that/which the cattle usually pass through is destroyed.’

In (37), the relative marker is a demonstrative suffix -qá’ ‘that’ (also the demonstrative suffixes serve as relative marker); in (38) it is the construct case suffix realized by a high tone (/ameeni--- > /ameení); and in (39), it is an independent construct case suffix ar which follows the feminine head noun.

Iraqw can relativize the following grammatical relations as indicated in examples below.

40) Subject
dasí-r-qá’ dir-qa-wa sihimit
girl:F-REL place:F-DEM-ABL stand:3.SG.PRES
‘the girl who/that is standing there…’
41) **Direct object**

\[
\text{tsifir-ino\,\,tarr\,\,axweesii\,\,a\,\,Irqwatoo} \\
\text{tongue:F-REL 3.PL DEP.S.1/2-INSTR speak:3.PL COP Iraqw:F} \\
\text{‘The language which they speak is Iraqw.’}
\]

42) **Indirect object**

\[
\text{/ameni-dá’ hee-dá-dá a\,\,sleeri\,\,haniis} \\
\text{woman:F-REL man:M-DEM4-DEM4 S.3:PERF cow:F-DIR give:3.SG.PAST} \\
\text{‘the woman to whom the man gave the cow…’}
\]

43) **Oblique object**

\[
\text{kurmo\,\,oo\,\,aning\,\,nir\,\,doosl} \\
\text{hoe:M REL.M 1.SG DEP.S.1.SG-INSTR hoe:1.SG.PRESS} \\
\text{‘the hoe with which I am hoeing with…’}
\]

The analysis of the data shows the possibility of relativizing five grammatical relations as captured in examples above.

### 4.4 Other Constituents of the NP in Iraqw

Two other elements exist as noun dependents in the Iraqw NP: the distributive determiner and genitive constructions.

#### 4.4.1 The Distributive Determiner

In Iraqw, the distributive is *umuú* ‘each, every’ is derived from a noun *uma* ‘which’. The distributive determiner appears in pre-determiner position giving the order DISTR>N>. This is the only element that appears before the head noun as in (44) and (45).

44) *umu* *na/aa-wo*

\[
\text{every:CON child:M-BACK} \\
\text{‘every child…’}
\]

45) *umuú-qo hee-wo oo qwaslariimar harahhiif*

\[
\text{every:CON-EMPH man:M-BACK REL magic:F.CON believe:M} \\
\text{‘anybody who believes in magic…’}
\]

The distributive determiner is marked with the construct case suffix and the following head noun carries the background suffix -o, whereby the -w- is a linker. In (45), *umuú* ‘each/every’ is suffixed with the emphatic suffix -qo to mean ‘each and’, ‘every/always’. The distributive determiner has co-occurrence restrictions with some postnominal dependents, such as demonstratives, indefinite markers, numerals and quantifiers. This will be illustrated in the discussion of co-occurrence restrictions.
4.4.2 Genitive Constructions

Nouns can be modified by genitive constructions. The genitive construction is a phrase which shows possession. It consists of possessum and possessor nouns which are linked by the construct case suffix which is marked on the possessum noun as in (46).

46) dasí-r do-in
   girl:F.CON house:M.3.PL-POSS
   ‘their household’s girl…’

In (46), the genitive construction is formed by two nouns (N + N(Poss) in this case); the possessum dasí-r ‘the girl of’ and the possessor do-in ‘their house’; henceforth, dasí-r do-in ‘their household’s girl’. The genitive construction occurs after the head noun.

47) inqwaarí-r dasí-r do-in na tsiiteek
   ‘Take the sheet of their girl (the girl of their house).’

In (47), the head noun inqwaarí-r ‘the sheet of’ is followed by the genitive construction dasí-r do-in ‘their girl’ giving the order (N + [N + N(poss)]). Like other modifiers (adjective, numerals), the head noun, followed by the genitive construction, takes the construct case suffix. Semantically, both possessives and genitive constructions have similar denotation of rendering a relationship of possession between two entities. However, morphosyntactically, they display distinctive properties. Possessives are affixes attached to the head noun; hence, they appear in the determiner slot, while the genitive construction is a phrase. Hence, it occurs in the modifier slot.

4.5 Word Order in the Iraqw NP

This section presents word order patterns within NPs in Iraqw. This is accomplished by assessing co-occurrence possibilities and constraints of the elements of the NP. The noun is the most important phrasal constituent as it gives identity to the whole phrase. Besides, it controls agreement (number and gender) of its dependents. Also, head nouns predominantly precede, and rarely follow, their dependents. This is found to be the case in all possible combinations attested in the data. Nine types of items were attested as noun dependents. The variation of the order in Iraqw NP is also revealed depending on the type(s) of element(s) used to modify the head noun. However, certain elements are restricted to particular positions, whereas others have more freedom of occurrence.

In terms of linear order, there are nine possible types of NPs in Iraqw as presented in (48).
The structure (a) represents the bare NP, where a single noun or its substitute stands as the NP. The structures (b, c, & d) involve affixal dependents which attach to the head noun. Modifiers can follow these affixal dependents. In structure (e), the head noun is modified by the possessive suffix, which, in turn, is followed by either the demonstrative suffix or its independent form. Moreover, (f) indicates that the head noun is modified by the possessive suffix followed by the indefinite independent form. At the same time, the demonstrative and the indefinite are in complementary distribution. The structure (g) illustrates that the head noun is immediately followed by modifiers (one to three modifiers can co-occur but subject to co-occurrence possibilities and constraints). Furthermore, structures (h & i) represent the pre-noun dependent. The distributive determiner precedes the head noun as in (h). It co-occurs with post-noun dependents, namely, possessives and relative clauses in (i). Based on these structures, we can say that the Iraqw NP may comprise of a head noun in isolation (bare NPs) and/or head nouns as a nuclei surrounded by determiners and modifiers.

Based on the structural patterns in (a-i), the canonical order of the Iraqw NP is summarized in the linear sequence in Table (2) below. This order suggests that in Iraqw, the head noun, predominantly, precedes its dependents.

**Canonical Order of the Iraqw Noun Phrase**

<table>
<thead>
<tr>
<th>01</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-N</td>
<td>Noun</td>
<td>Post-noun</td>
<td></td>
</tr>
<tr>
<td>Pre-Det</td>
<td>Determiners</td>
<td>Modifiers</td>
<td></td>
</tr>
<tr>
<td>DISTR.</td>
<td>N</td>
<td>POSS</td>
<td>DEM/INDEF</td>
</tr>
<tr>
<td>GEN</td>
<td>ADJ</td>
<td>NUM/QUANT</td>
<td>RC</td>
</tr>
</tbody>
</table>

The canonical order in the table above accommodates elements of the NP, specifically, the distributive determiner, genitive constructions and quantifiers that were missing in Mous (1993). The distributive determiner is treated separately from quantifiers because of the syntactic distribution within the noun phrase. As indicated in the table, the distributive determiner occurs before the head noun while quantifiers occurs in the modifier slot.

Obviously, this is one of the major contributions which this article has made to the previous study of Iraqw NPs by Mous (1993). First, in the contemporary order, a construct case

---

1 Any modifier [Mod] can appear after the determiners, namely Poss, Dem/Indef.
2 The distributive determiner displays co-occurrence restriction with most of the post noun dependents except relative clause and possessives.
suffix is not considered as a dependent of the NP; instead, it is regarded as a special morphological form taken by a head noun when followed by modifiers such as adjectives, numerals, etc. Also, the suffix is used to form the genitive phrase and relative clauses. Thus, the suffix has a grammatical role rather than being a dependent of the NP. Second, adverbs and prepositional phrases are not considered as independent elements of the NP. Instead, they are treated as adverbial relative clauses. Third, case clitics are not included as noun dependents because, like a construct case suffix, they have grammatical functions. Case clitics are peripheral elements because they tend to occur after relative clauses. Relative clauses tend to occur at the end of phrase because they are heavier and contain more new information than affixes and shorter dependents of the NP (Firbas 1996; Rijkhoff 2002); hence, case clitics that appear after RCs are not elements of the NP.

4.6 Co-occurrence Possibilities and Constraints

The data revealed that possessives, demonstratives and indefinite affixes are accorded special status in their position immediately after the head noun. However, the possessive is the closest companion of the head noun. Demonstratives and indefinite markers never precede possessives. Regarding the ordering and co-occurrence constraints in definiteness and indefiniteness marking, the findings revealed that possessives are followed by independent indefinite forms and not by suffixes. Moreover, demonstrative and indefinite markers are in complementary distribution. The fact is that possessive and demonstrative affixes function to mark definiteness and referentiality while indefinite suffixes mark indefiniteness in the language. Supporting this, Mous (2012) asserts that possessives and demonstratives are the definite nominal affixes in Iraqw.

Further, co-occurrence of the indefinite affixes with definite determiners (possessives or demonstratives) is restricted due to the semantic conflict. This gets further support from the restriction of co-occurrence between demonstratives and indefinite markers. The meanings of the two dependents are semantically incompatible because demonstratives mark definiteness and indefinite forms mark indefiniteness. However, possessive affixes co-occur with demonstratives and the indefinite independent dependents. This is because the possessive affix in such contexts has referential functions. Therefore, possessives are used for referential function when they co-occur with either demonstratives or indefinite suffixes.

Furthermore, the distributive determiner (DISTR) has limited co-occurrence possibilities. The presence of DISTR in the phrase restricts the occurrence of demonstratives, quantifiers, and numerals. The data showed co-occurrence of DISTR with the possessives (50) and relative clauses (51).

50) umuú-qo na/aay-ˈeé’-ne
   every:CON-EMPH child:M-1.SG.POSS-BACK
   ‘each child of mine…’

51) umuú-qo hee-wo oo qwasliimár harahhiif
   every:CON-EMPH man:M-BACK REL magic:F.CON believe:M
   ‘anybody who believes in magic…’
Another co-occurrence restriction is between numerals and quantifiers. The two dependents appear in the same modification slots but they have limited co-occurrence options, because otherwise the construction is ill formed.

52) *bee/angw yariiy koo’an
   sheep:M.PL many five:F
   ‘many five sheep…’

Ungrammaticality, in (52), is due to the semantic incompatibility of the meaning of numerals and quantifiers. While numerals express the absolute quantity of an entity, quantifiers express indefinite number of the entity. Thus, the two meanings are mutually exclusive.

Accordingly, possessives and genitive constructions belong to the same semantic category but never co-occur. Possessives are suffixes which denote the owner of the head noun e.g. doo-’ée ‘my house’ while the genitive construction is a phrase consisting of two nouns, possessor and possessed (kitang’w aako ‘grandfather’s chair’). In terms of slot, possessives occur in the determiner slot because they are suffixes, whereas genitive constructions occur in the modifier slot.

The findings revealed that modifiers, such as adjectives, numerals and relative clauses are not subjected to co-occurrence constraints with affixal dependents. They can follow head nouns with possessives, demonstratives and indefinite suffixes.

Adjectives and numerals exhibit freedom of occurrence. They can occur in the order N>ADJ>NUM or N>NUM>ADJ, without altering the meaning. The displacement is enhanced by the use of the independent construct case suffixes. These cases maintain the grammatical relation between the raised numeral and the adjective as in (53) and (54).

53) hhadaá ninakw tám
   stick:N.CON small:PL three:F
   ‘three small sticks…’

54) hhadaá tám awa ninakw
   stick:N.CON three:F INDEP.N small:PL
   ‘three small sticks…’

Of all dependents of the noun, relative clauses are restricted to the final edge of the NP because their weight does not allow them to precede suffixes or shorter words (Rijkhoff 2002). They tend to contain newer information than the shorter modifiers. Their appearance at the edge of the NP satisfies pragmatic constraints favouring the given-new ordering of information (Firbas 1996).

5 Conclusion

The article has revealed that the Iraqw NP is made up of a noun, or its substitute form, which is a pronoun. The head noun may occur in isolation, or as a nucleus surrounded by one or more peripheral elements. Such elements are possessives, demonstratives, indefinite markers, the distributive determiner, adjectives, numerals, quantifiers, relative clauses, and genitive constructions. Of all the dependents, only the distributive determiner precedes the head noun, giving the canonical order: (DISTR)<N>POSS>DEM/INDEF>GEN>ADJ>NUM/QUANT>RC.
Using the construct case suffix attached to the head noun and morphosyntactic properties as distinguishing criteria, noun dependents fall into two categories: determiners and modifiers. Determiners include possessives, demonstratives, indefinite markers, and the distributive determiner, while modifiers include adjectives, numerals, quantifiers, relative clauses, and genitive constructions. Regarding the order of the dependents within Iraqw NP, the rules for ordering are open, as several possibilities of stacking one to nine dependents are attested. However, in linear ordering, possessives occur closer to the head noun and are never preceded by other dependents. With regard to the co-occurrence of noun dependents, it has been shown that demonstratives and indefinite markers are in complementary distribution. Other elements that are in complementary distribution are possessives and genitive constructions, numerals and quantifiers, as well as the distributive determiner and demonstrative, quantifiers, and numerals.

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Alphonce: The Structure of the Iraqw Noun Phrase

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**Abbreviations, Acronyms, and Symbols**

| 1, 2 & 3 | person, deixis |
| ABL | Ablative |
| Adj | adjective |
| BACK | background suffix |
| CON | construct case suffix |
| COP | copula |
| DEM | demonstrative |
| DEP | dependent |
| DIR | Directive |
| DISTR | distributive determiner |
| EMPH | emphatic |
| F | feminine |
| Gen | genitive construction |
| HAB | habitual |
| HPP | Head Proximity Principle |
| IMPS | impersonal |
| INDEF | indefinite markers, |
| INDEP | independent |
| INSTR | instrumental |
| LOT | Languages of Tanzania, |
| M | masculine |
| Mod | Modifier |
| N | noun, neuter |
| NP | noun phrase |
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