NP Internal Adjective Order in Zulu

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Abstract

This paper investigates NP internal adjective order in Zulu. I conducted the fieldwork with a native speaker of Zulu using four adjectives from different conceptual categories. The number of adjectives is variable among two, three and four adjectives. Also, presenting order is replaced. The data is analyzed based on a rigid adjective order in English suggested by Watanuki et al. (2000): self-impression + size + form + property + age + color + origin + material + N. As a result, the accordance with the rigid adjective order in English is not found in Zulu. Issues of methodology and the effect of a class marker on adjective order is discussed as the reason of flexible adjective orders in Zulu.

1. Introduction

Investigations on NP internal adjective order in English have revealed a fixed order (Cinque; 2009 and Watanuki et al.; 2000). NPs of other languages such as Italian and Chinese have also been analyzed in order to determine whether there is a preferred internal order adjective (Cinque; 2009). NP internal adjective order in Zulu, however, still seems to be a topic for further investigation.

Zulu, which is spoken in Natal and Zululand, belongs to Nguni language group². Similar to English, Zulu is a head-initial language. On the other hand, the order of a noun and an adjective in a NP in Zulu is N+Adj³, hence the opposite of English.

Adjective order preference⁴ by conceptual category could not be found in Zulu as a result of the fieldwork I conducted with a native Zulu speaker. In the fieldwork, I elicited NPs with modifying adjectives. Each NP is composed of one noun and from one to four adjectives. Adjectives are divided into four conceptual categories and they are altered with respect to the number of adjectives and presenting order.

The organization of this paper is as follows: in Section 2, I first review previous studies of NP internal adjective order in English. In Section 3, I will indicate adjective order in Zulu divided into the number of adjectives in a noun phrases. In Section 4, possible factors altered order preference in Zulu will be discussed. In Section 6, I will conclude this paper.

2. Previous Studies

Previous studies show that NP internal order is fixed in English, and Cinque (2009) points out that English has a rigid adjective order. The examples are seen below.

- (1) a. He is an old electrical engineer.
 - b. *He is an electrical old engineer.
- (2) a. He is an occasional hard worker.
 - b.*He is a hard occasional worker.

² Nguni language group is consisting of Zulu, Xhosa and Swati. The group is a part of the South-eastern zone of Bantu languages.

³ For poetic expressions only, Adj +N is possible in Zulu.

⁴ A reviewer pointed that the word meaning of "adjective order preference" is not clear (e.g. based on whether grammaticality (syntactic point of view) or acceptability (pragmatic point of view)). In this paper, I broadly defied the word and the meaning is close to the natural word order.

Replacing the order of two adjectives influences the grammatical judgments of native speakers of English. Watanuki et al. (2000) proposes more concrete sequence of adjectives.

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(3) self-impression + size + form + property + age + color + origin + material + N
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In contrast to the abundance of literature on English, previous studies on NP internal adjective order in Zulu could not be found. For example, Poulos and Bosch (1997) discuss concords and stems, but fail to mention adjective order. Moreover, in grammar books of Swati (belonging to the same Nguni language group as Zulu), and Northern Sotho (belonging to the same south-eastern zone of the Bantu language group as the Nguni language group), there is no description of adjective order. This paper will attempt to build a foundation for the literature on NP internal adjective order in Zulu, using methods in fieldwork.

3. Adjective Order in Zulu

Here, I will introduce four Zulu nouns and five Zulu adjectives which are used in the elicitation and necessary to analyze the results. The four nouns are as follows: "person", "woman", "table", and "stone". "Person" and "woman" are from Class 1, a group which includes nouns related to human. "Table" and "stone" are from Class 5, a group which includes nouns related to non-human.⁵ The noun class difference was made in order to confirm whether human and non-human nouns affect the preferred adjective order.

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(4) Categories of Nouns
  a. Class1 (human):
                         "person"
                                    umu-ntu
                                     C1 -person
                         "woman"
                                    um-fazi
                                    C1 -woman
  b. Class5 (non-human): "table"
                                     i -tafula
                                  C5 -table
                         "stone"
                                     i-tshe
                                  C5 -stone
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The class prefix corresponding to each noun class dictates which class a noun belongs to. As seen in (4), *umu* and *um* are Class 1 prefixes and *i* is a Class 5 prefix.

The five adjectives are as follows: "beautiful", "tall", "big", "white" and "Japanese". Each adjective is from the following four categories of adjectives: self-impression, size, color and origin. "Beautiful" belongs to adjectives which indicate self-impression. "Tall" and "big" is a part of size adjectives ("tall" is for human nouns and "big" is for non-human nouns). "White" and "Japanese" belong to adjectives of color and origin respectively. The same kind of class-markers that attach to nouns also attach to adjectives. Class-markers of adjectives change depending on noun class.

(5) Conceptual categories of Adjectives a. self impression: "beautiful" omu-hle,

eli-hle

C5-beautiful C1-beautiful

b.size: "tall" omu-de

C1-tall

⁵ Nouns related to human are members of Class 1 and 2 and that related to non-human are member of Class 5 and 6. Odd number of class means that singular nouns are included and even number of class means that plural nouns are included.

"big" eli-khulu C5-big

c.color: "white" wo-mlungu/ o-mhlophe

C1-white/C1-white

eli-mhlophe C5-white

d.origin: "Japanese" w-aseJapaniC1, l-aseJapani

> C1-Japanese C5-Japanese

The conceptual categories of adjectives are chosen based on (3), and the applicability to both human and non-human nouns. According to the results of the elicitation, noun class does not affect the order of adjectives in Zulu. Thus, for the purposes of this paper, I found it sufficient to present NPs with "person" only, since the results were not affected by the noun ("woman", "table, or "stone").

3.1. *Basic ordering of Zulu adjectives* This section presents NPs which consists of a noun and an adjective in order to confirm whether N+Adj is the basic internal order of NPs in Zulu. The examples in (6) through (9) verify that the basic internal order of NPs in Zulu is N+Adj.

(6)N+ self-impression umu-ntu omu-hle C1-person C1-beautiful

(7) N+ size umu-ntu omu-de C1-person C1-tall

(8) N+ color wo-mlungu⁶ C1-white person

(9) N+ origin umu-ntu w-aseJapani C1 -person C1-Japanese

- **3.2** *Ordering of Zulu adjectives* I will discuss the adjective order according to the number of adjectives. The data reveals that some adjective orders are consistent with (3) and others are not.
- **3.2.1** *Two adjectives* NPs with two modifying adjectives from different conceptual categories and a noun are indicated in (10) through (15). Adjective orders in (10) through (14) are consistent with (3) whereas that in (15) is not.
- (10) N+size+self-impression umu-ntu omu-de omu-hle C1-person C1-tall C1-beautiful

⁶ The meaning of "person" is included in womlungu.

(11)N+ color+self-impression wom-lungu omu-hle C1-white person C1-beautiful

(12) N+ origin+ self-impression umu-ntu w-aseJapani omu-hle C1-person C1-Japanese C1-beautiful

(13)N+ origin +size umu-ntu w-aseJapani omu-de C1-person C1-Japanese C1-tall

(14)N + origin+color umu-ntu w-aseJapani o-mhlophe C1-person C1-Japanese C1-white

The adjective order "N +origin +color +size +self-impression" in Zulu is in accordance with English adjective order (i.e., (3)"self-impression +size +color +origin +N".) However, (15) shows that an adjective order is different from English.

(15) N+ size+ color umu-ntu omu-de o-mhlophe C1-person C1-tall C1-white

Hence, except for the adjective order between size and color, Zulu adjective orders are consistent with (3).

- **3.2.2** *Three adjectives* NPs which consist of three adjectives from different conceptual categories and a noun are shown from (16) to (19).
- (16) N+ origin+ self-impression+ size umu-ntu w-aseJapani omu-hle omu-de C1-person C1-Japanese C1-beautiful C1-tall
- (17) N+ origin+ self-impression + color umu-ntu w-aseJapani omu-hle o-mhlophe C1-person C1-Japanese C1-beautiful C1-white
- (18) N+ origin +size+ color umu-ntu w-aseJapani omu-de o-mhlophe C1-person C1-Japanese C1-tall C1-white
- (19) N+ color+ self-impression + size wom-lungu omu-hle omu-de C1-white person C1-beautiful C1-tall

All adjective orders are not in accordance with (3).

- **3.2.3** *Four adjectives* NPs which consist of four adjectives from different conceptual categories and a noun are shown in (20). The adjective order does not follow (3).
- (20) N+ origin + self-impression + size+ color umu-ntu w-aseJapani omu-hle omu-de o-mhlophe C1-person C1-Japanese C1-beautiful C1-tall C1-white

In summary, adjective order in most NPs composed of a noun and two adjectives are consistent with (3). On the other hand, noun phrases including three or four adjectives have different adjective order from (3).

- **3.3** Confirmation of ordering of Zulu adjectives Section 3.2 showed that some adjective orders are the same as (3) and others are not. In order to investigate the reliability of the analysis in Section 3.2, I analyzed the adjective order in Zulu by changing the order of presentation with the two adjectives and four adjectives. The results were much more inconsistent than that of Section 3.2.
- **3.3.1** Two adjectives The data from (21) to (26) are noun phrases with two adjectives and a noun. The order of the two adjectives in Zulu is opposite to (3) except for (21) and (23).
- (21) N+color+size wom-lungu omu-de⁷ C1-white person C1-tall
- (22) N+self-impression+size umu-ntu omu-hle omu-de C1-person C1-beautiful C1-tall
- (23) N+self-impression+color omu-hle wom-lungu C1-beautiful C1-white person^{6,8}
- (24) N+ self-impression+origin umu-ntu omu-hle w-aseJapani C1-person C1-beautiful C1-Japanese
- (25) N+ size +origin umu-ntu omu-de w-aseJapani C1-person C1-tall C1-Japanese
- (26) N+ color+origin wom-lungu w-aseJapani⁶ C1-white person C1-Japanese

Adjective orders between size and color are in accordance with (3). However, the other five cases are not.

- **3.3.2** Four adjectives One phrase with four adjectives (i.e., "beautiful tall white Japanese person") is modified in terms of the order of all the adjectives in Zulu. (27) has the same adjective order as (3). It can be seen that adjective orders in (28) through (50) are not consistent with (3).
- (27) N +origin +color +size +self-impression umu-ntu w-aseJapani o-mhlophe omu-de omu-hle C1-person C1-Japanese C1-white C1-tall C1-beautiful

⁷For (21), (23) and (26), I presented the phrases using *womlungu* which means "white person" The following data indicates the original forms.

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⁽²¹⁾ womlungu omude = umu-ntu o-mhlophe omu-de

⁽²³⁾ omu-hle wom-lungu = omu-hle umu-ntu o-mhlophe

⁽²⁶⁾ wom-lungu w-aseJapani = umu-ntu o-mhlophe w-aseJapani

⁸ The order of the noun and the adjectives in (23) is not following "N+Adj+Adj". It becomes "Adj+N+Adj".

- (28)N +self-impression +size +color +origin umu-ntu omu-hle omu-de o-mhlophe w-aseJapani C1-person C1-beautiful C1-tall C1-white C1-Japanese
- (29) N +self-impression +size +origin +color umu-ntu omu-hle omu-de w-aseJapani o-mhlophe C1-person C1-beautiful C1-tall C1-Japanese C1-white
- (30) N +self-impression +color +size +origin umu-ntu omu-hle o-mhlophe omu-de w-aseJapani C1-person C1-beautiful C1-white C1-tall C1-Japanese
- (31) N +self-impression +color +origin +size umu-ntu omu-hle o-mhlophe w-aseJapani omu-de C1-person C1-beautiful C1-white C1-Japanese C1-tall
- (32) N +self-impression +origin +size +color umu-ntu omu-hle w-aseJapani omu-de o-mhlophe C1-person C1-beautiful C1-Japanese C1-tall C1-white
- (33) N +self-impression + origin + color +size
 umu-ntu omu-hle w-aseJapani o-mhlophe omu-de
 C1-person C1-beautiful C1-Japanese C1-white C1-tall
- (34) N +size +self-impression +color +origin umu-ntu omu-de omu-hle o-mhlophe w-aseJapani C1-person C1-tall C1-beautiful C1-white C1-Japanese
- (35) N +size +self-impression+origin +color umu-ntu omu-de omu-hle w-aseJapani o-mhlophe C1-person C1-tall C1-beautiful C1-Japanese C1-white
- (36) N +size +color +self-impression +origin umu-ntu omu-de o-mhlophe omu-hle w-aseJapani C1-person C1-tall C1-white C1-beautiful C1-Japanese
- (37) N +size +color +origin +self-impression umu-ntu omu-de o-mhlophe w-aseJapani omu-hle C1-person C1-tall C1-white C1-Japanese C1-beautiful
- (38) N +size +origin +self-impression +color umu-ntu omu-de w-aseJapani omu-hle om-hlophe C1-person C1-tall C1-Japanese C1-beautiful C1-white
- (39) N +size +origin +color +self-impression umu-ntu omu-de w-aseJapani o-mhlophe omu-hle C1-person C1-tall C1-Japanese C1-white C1-beautiful
- (40) N +color +self-impression +size +origin umu-ntu o-mhlophe omu-hle omu-de w-aseJapani C1-person C1-white C1-beautiful C1-tall C1-Japanese

- (41) N +color +self-impression +origin +size umu-ntu om-hlophe omu-hle w-aseJapani omu-de C1-person C1-white C1-beautiful C1-Japanese C1-tall
- (42) N +color +size +self-impression +origin umu-ntu o-mhlophe omu-de omu-hle w-aseJapani C1-person C1-white C1-tall C1-beautiful C1-Japanese
- (43) N +color +size +origin +self-impression umu-ntu o-mhlophe omu-de w-aseJapani omu-hle C1-person C1-white C1-tall C1-Japanese C1-beautiful
- (44) N+color + origin+ self-impression +size umu-ntu o-mhlophe w-aseJapani omu-hle omu-de C1-person C1-white C1-Japanese C1-beautiful C1-tall
- (45) N +color +origin +size +self-impression umu-ntu om-hlophe w-aseJapani omu-de omu-hle C1-person C1-white C1-Japanese C1-tall C1-beautiful
- (46) N +origin +self-impression +size +color umu-ntu w-aseJapani omu-hle omu-de o-mhlophe C1-person C1-Japanese C1-beautiful C1-tall C1-white
- (47) N +origin +self-impression +color +size
 umu-ntu w-aseJapani omu-hle o-mhlophe omu-de
 C1-person C1-Japanese C1-beautiful C1-white C1-tall
- (48) N +origin +size +self-impression +color umu-ntu w-aseJapani omu-de omu-hle o-mhlophe C1-person C1-Japanese C1-tall C1-beautiful C1-white
- (49) N+ origin+ color+ self-impression +size
 umu-ntu w-aseJapani o-mhlophe omu-hle omu-de
 C1-person C1-Japanese C1-white C1-beautiful C1-tall
- (50)⁹ N +origin +size +color +self-impression umu-ntu w-aseJapani omu-de o-mhlophe omu-hle C1-person C1-Japanese C1-tall C1-white C1-beautiful

This section found that twenty-three of the twenty-four adjective orders are different from (3). In summary, ungrammatical adjective order did not appear in the elicitation with the native Zulu speaker. Zulu adjective order is considered to be flexible.

4. Discussion

Adjective order preference based on conceptual category is not clear in Zulu. Zulu adjective order seems relatively free. The following two reasons can be considered: methodology of the field work and the existence of class marker in Zulu.

⁹ (50) is the most natural order for the Zulu speaker in the twenty-four choices of four adjectives order.

The methodology used in the field work was not suitable for investigating adjective order preference. There were two main methods to the methodology. In the first method, the participant was asked to translate English NPs in Zulu (e.g. "How do you say beautiful tall woman?" "Um-fazi omu-de omu-hle"). In the second method, the participant was asked to interpret the meaning of Zulu NPs and translate them into English (e.g. "What's the meaning of um-fazi omu-de omu-hle?" "Tall beautiful woman."). The methodology was switched from the first to second between 3.2 and 3.3 in order to eliminate the effect of the translation. The Zulu NPs used in the second method were created based on the Zulu data obtained in the first method. Thus, other combinatory possibilities of a particular set of adjectives were not exhaustively investigated within one method. It was necessary because the difference of methodology might affect the analysis. In addition, the second method may have produced unreliable results, considering that the participant may have consciously selected a particular order of adjectives to be most understandable, which may be a different order in natural production. Also, because all adjective order patterns of four adjectives were elicited continuously, the participant may have placed more importance on adjectives presented earlier. The continuous elicitation made the participant examine the reason why the adjective orders were replaced and try to meet my expectation.

From syntactic point of view, the presence of class marker may affect adjective order. English has a rigid adjective order due to the absence of class markers, while Zulu has a relaxed adjective order because of the presence of class markers. However, examination of Japanese reveals that class-markers do not affect the flexibility of adjective order. Japanese is a head final language unlike English and Zulu, however, there are no class-markers, similar to English.

- (51) and (52) shows the all orders of two adjectives. The material is the same as (10) and (22).
- (51) utsukushi-i senotaka-i hito beautiful-adjective marker tall-adjective marker person
- (52) senotaka-i utsukushi-i hito tall- adjective marker beautiful-adjective marker person

Both orders are possible in Japanese. The Adjective order is relaxed, although Japanese does not have a class marker. Hence the presence of a class marker does not determine whether adjective order is rigid or relaxed.

Zulu has been compared to English in terms of adjective order. However, if I assume that Zulu is similar to Japanese, the result that rigid adjective order is not found in Zulu deserves of the study. ¹⁰

5. Conclusion

This paper has investigated the preferred order of adjectives in Zulu. Although the research was conducted by changing the number of adjectives in a noun phrase, a rigid adjective order, like in English, was not found regardless of the number of adjectives. It was discussed that issues of methodology and the

¹⁰ For the other factor, the order preference might be altered if some manipulations are carried out. For example, in Japanese prenominal modifier, the order will be relaxed by addition of the noun phrases. The order of prenominal modifier in (53) is replaced in (54). (54) is unacceptable because the meaning of "strong willingness" is changed as "strong linguistics" and far from the original meaning.

⁽⁵³⁾gengogaku-o yarou-toiu kata-i ketsui

[&]quot;strong willingness to study linguistics"

^{(54)*}kata-i gengogaku-o yarou-toiu ketsui

[&]quot;willingness to study strong linguistics"

The order which is unacceptable in (54) will be acceptable by adding ishi-noyouni "as hard as stones" as in (55).

⁽⁵⁵⁾ishi-noyouni kata-i gengogaku-o yarou-toiu ketsui

[&]quot;strong willingness as hard as stones to study linguistics"

effect of a class marker on adjective order may have affected the results. There is still need of further investigation in order to confirm whether Zulu does have a flexible NP internal adjective order.

As further research, I would like to modify the methodology, taking in to consideration the factors which may affect adjective order. Investigation of all adjective order possibilities will produce more reliable results. The analysis may provide insight on the type of factors, within a language, that determine the rigidness of adjective order.

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