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Acquisition of Tense in Xhosa: The Long and the Short of it

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The purpose of the present paper is to determine when Xhosa-speaking children master the morphology of tense. Specifically, we ask when Xhosa-speaking children learn the conditions on the two forms of the Present and Recent Past tenses, namely the long and the short forms. Despite the fact that there are complex grammatical conditions on which form is appropriate in a sentence, the paper will demonstrate that young children can attend to these grammatical conditions.

Characteristics of Xhosa

Xhosa is a Southern Bantu language of the Nguni family, along with Zulu and . These languages are primarily agglutinative, with rich morphology on the verb stem. Du Plessis and Visser (1998) describe the verb stem as having nine separate slots connected with it, including subject and object agreement, derivational suffixes, negation, tense and mood.

The morpheme ordering in Xhosa is:

Subj. Agr. –Tense-(Obj. Agr.)-Verb Root-(Deriv. Suffixes)-Mood

Ndi - ya m thethi - is -a

I (pres) him/her speak cause-to ind

" I cause him to speak"

In Nguni languages like Xhosa, there is also an extensive set of noun classes, 15 counting singular and plural forms, that determine the kind of prefix on a noun stem and the s=agreements borne by a noun's modifiers and complements. Subject and object agreement on the verb are conditioned by noun class, so even simple sentences have an elaborate grammar for children to acquire (Gxilishe, de Villiers & de Villiers, 2007).

Xhosa is also a pro-drop language.

Figure 1 shows the basic D structure of a simple Xhosa sentence (du Plessis and Visser, 1998), and Figure 2 the S structure. It is assumed that the subject and noun are base generated in the VP with their noun classes established in the lexicon. The verb is assumed to move to Tense to pick up tense marking, then to AgrS once the subject has moved to Spec AgrS to license subject agreement on the verb. Object agreement is more elaborate and conditioned by such variables as specificity and interacts with choice of tense, as shown below.

Tenses in Xhosa

Xhosa has four basic tenses:

Remote past: Nd-a-hamb-a

I went (long ago)

Recent past: Ndi-hamb-ile

I went (recently)

Present: Ndi-ya-hamb-a

I am going
 Future: Ndi-za ku-hamb-a
 I will go

However, the interest in the present work is the alternation between different varieties of the Present and Recent past forms, called the long and short forms. This is the traditional terminology in Bantu language description referring to different tense forms, also referred to in the literature as the disjoint/conjoint distinction (Meeusen, 1959) or the disjunctive/conjunctive distinction (Creissels, 1996). Existing linguistic analyses are of languages in this family such as Zulu, Rundi, Tswana, as well as Xhosa. Here we rely heavily on sources such as Van der Spuy (1996) and Buell on Zulu (), Creissels on X? , duPlessis and Visser and Ntleki () on Xhosa.

Compare the long and short forms of the present tense in the following pair:
 Subject SAgr Tense OAgr Verb Mood Object

1. Umama u- Ø- Ø- phek- a umngqusho
2. Umama u- ya- wu- phek- a umngqusho

Notice that the short form has a zero morpheme, and no object agreement, but the long form is the morpheme ya- and the object agreement wu- is present. The following generalizations appear to fit the data:

The long form is obligatory with simple *intransitives*:

1.
 - (a) Umama uyasebenza
 'Mother works'

The short form (Ø) is not permitted:

- (b) *Umama usebenza
 'Mother works'

In contrast, the short form is grammatical in a transitive sentence:

- 2) Umama upheka umngqusho
 'Mother cooks samp'

However transitivity is not the fundamental contrast, because the short form is not only obligatory with simple transitives but also with *intransitives* with Adverbs,

- 3 (a) Usebenza kakhulu
 'He works hard'
- also Quantifiers,
 - (b) Usebenza yedwa
 'He works alone'
- and Locatives
 - (c) Basebenza e Kapa
 'They work in Cape Town'

As for the long form,, 2 makes it plain that the long form is possible with a transitive verb as long as the **object agreement marker** is present:

4 a) Umama u- ya- wu-pheka umngqusho
1a-Mother SAgr-Pres-OAgr-cook samp

Without object agreement, the long form is **not** permissible in a sentence like (1b):

b) *Umama u- ya- pheka umngqusho
1a-Mother SAgr-Pres-cook samp

The **recent past** behaves in the same way as the present tense. The long form **-ile** occurs with object agreement marking:

5 a) Ba- li-ty- ile
They it eat-Recent Past
'They ate it'

and simple intransitives:

b) Ba- theth- ile
They speak- Recent Past
'They spoke'

The short form of the recent past (the morpheme "e") occurs with overt objects in transitives OR in intransitives with Adverbs or Locatives or Quantifiers following the verb. That is, the short and long forms of the recent past behave just like the short and long forms of the present tense.

Van der Spuy (1993) and Buell (2006) offer an account of the distribution of the two forms in terms of constituency as follows.

A long form must be final in its constituent, but a short form is non-final in its constituent.

$[V_{\text{long}}]_{\text{AgrSP}}(X)(Y)$
 $[V_{\text{short}}X]_{\text{AgrSP}}(Y)$

What evidence is there for this analysis? The first comes from phonology, because in Xhosa as well as Zulu, the last element in a phrase has penultimate vowel lengthening. Hence, the object noun *umngqusho* has a long vowel reflecting its final position in the phrase following the short form of the verb *upheka*:

6. [[Umama upheka umngqu:sho]
Mother cooks samp

But then why does the long form of the verb have vowel lengthening in the verb *upheka* even when there is a following *object*?

[[Umama uyawuphe:ka] umngqu:sho]
Mother cooks samp

(Mother *does* cook samp)

The answer must be that the object noun has been moved outside the verb phrase, leaving the long verb in final phrase position and thus causing vowel lengthening. So phonological evidence is part of the evidence for the different phrase structure of long and short forms.

The second source of evidence for the structural distinction is from agreement. As described, the subject in Xhosa must move through spec AgrS for a verb to get subject agreement in AgrS. If a subject is in front of the verb, the verb takes subject agreement with both long and short forms.

E.g. 6 a) Umama uyacula

b) Umama upheka umngqusho

However, Xhosa allows other orders of subject and verb (du Plessi and Visser, 1998), for example, postverbal subjects are common. If the subject is postverbal, then the short form is not grammatical with simple agreement:

7a) *Uacula umama

But agreement is found on the long form:

b) Uyacula umama

What accounts for this effect?

Discussing Zulu, Buell argues that in the case of the short form, the subject has stayed in its D-structure position and has not moved through specAgrS to license verb agreement.

8 [V subject]_{AgrS}

In the long form, the subject has moved first to spec-Agr-S (licensing verb agreement) and then *outside* the phrase altogether.

9 [V]_{Agr S} subject

Together, the arguments predict that penultimate vowel lengthening should occur on the postverbal subject in 7a/8 but on the verb in 7b/9. **Sandile- check intuitions!!! Do you pronounce "cula" differently in**

Cula umama

Versus

Uyacula umama?

If these analyses are correct, then the short/long form alternation is governed by grammatical principles of phrase structure and movement. Other writers () have emphasized the role of focus or emphasis in dictating the use of the forms, but Buell () finds these analyses insufficient to the task. We asked, how do Xhosa speaking children come to use the long and the short forms, and at what age? Do children establish the right analysis from the start, or do they just alternate the forms at random? Do they learn the morphemes piecemeal, e.g. with particular verbs (Tomasello)? Do they ever use a simpler heuristic, say, based on transitivity?

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The database of Xhosa-speaking children

- The children are six: two boys, four girls
- Collected longitudinally from 2-3;3yrs
- Monolingual Xhosa speakers growing up in Guguletu, near Cape Town, South Africa.
- Data collected, taped, and transcribed by a native Xhosa speaking RA who interacted

with the children.

The samples

- The samples were collected every 2 months.
- These were collapsed for this analysis into three age groupings to allow enough data per time.

Number of Utterances and (Sessions) Methods

The main question of the study is whether the young Xhosa-speaking child knows the **conditions of use** on short versus long forms of the Present and Recent Past Tense forms. To investigate this, the following forms were excluded: imperatives, interrogatives, negatives because these forms have other morphological complications.

It is possible that a child might entertain a simpler hypothesis than the adult rules. Given that the difference between transitive and intransitive verb forms is a highly salient part of early grammars (Naigles, Fisher), we wanted to explore the possibility that the child would use a heuristic such as:

Short forms are for transitives

Long forms are for intransitives

Where would this go wrong? Table X shows the differences between the adult rules and the heuristic.

A. Adult Xhosa rules:

Long form is obligatory for

- a) Simple Intransitives
- b) Transitives with object agreement marking
- c) **Short form** is used for:
 - a) Transitives without object agreement marking
 - b) Intransitives with other adjuncts

B. Possible child hypothesis:

Long form is used for

- a) Intransitives

a) **Short form** is used for

- b) Transitives

Each sentence in the corpus that contained a Present or Recent Past Tense form was classified as having a

Short form or

Long form

Then the grammatical *condition* for each form was coded e.g. simple intransitive, transitive, object agreement marking, presence of adverb etc.

A sample of transcript is shown in Table Z, with the child utterance, the target adult form, and a rough gloss into English.

Table Z: A sample of transcript

Results

Figure 3 shows the percentage of overt tense supplied by children in obligatory contexts over the age span studied. (Qualify about zero forms?)

Figure 4 shows the percentage of short forms used by the children that are accounted for by the adult rules, versus the percentage that are accounted for if we assume the transitivity heuristic. It is clear from the graph that the children are using the forms in the range of contexts typical for adult rules, not just to demark transitive sentences. They are using the short forms with intransitives and other following adjuncts such as quantifiers: (here insert examples) **Should these be glossed morpheme by morpheme?**

Sihleli sedwa	Sihleli sodwa	We are at home alone B, 26mos
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and adverbs:

ikhale kamandi	ikhale kamnandi	??played nicely?? M, 28 mos.
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and locatives:

hlal ekhaya	uhlala ekhaya	She is staying at home N, 34 mos
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and with transitive sentences without object agreement:

Ubambe incwadi	Ubambe incwadi	He is handling a book M, 28 mos.
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Notice that this is not just the zero-marked present form, but also the short form of the recent past that is an overt morpheme and has the same range of conditions on its use. The sentence vary in their verbs within one child's transcripts, so it does not seem that these are idiomatic or stereotyped forms. (count?)

Figure 4 shows the corresponding graph of the percentage of long forms used by the children that fit the adult rules, versus those that would be accounted for by the transitivity heuristic. Children do not just restrict the long form to intransitives, as in:

Chamil' ntana	Uchamile umntwana	The child has urinated. N, 30mos
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but instead use the long form with object agreement in transitives, for example:

Jonga uyandidubuya	Jonga uyandidubula	Look she is shooting me B, 27 mos
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Discussion

First, overt tenses are correctly supplied 91% of the time in obligatory contexts. In this

respect Xhosa is, like Swahili, not a “root infinitive” language that encourages bare tense forms (Deen, Wexler). However, since the short present tense is zero, we had to exclude utterances that could have been zero short forms from the graph of overt tenses, and it could be argued that these are in fact bare forms. The argument against this comes from their appropriate distribution according to conditions on the short form.

2-3 year olds appear to know the adult conditions on use of the long and short forms of the Present and Recent Past tenses. They do not appear to use a simpler rule based only on transitivity, but instead respect the more complex adult conditions on long and short forms.

Abstract formal rules seem to be easy for young children. This point has been made before (Levy, Naigles,)

However, many further questions arise. In particular, more data are needed on two further characteristics of these forms:

A) Do children show phrase-final penultimate vowel lengthening on the long verb forms?

B) Do children respect the agreement rule for short verb forms with postverbal subjects?

These are characteristics of adult Xhosa but are not yet proven in children. It may not be possible to extract these data from naturalistic corpora since closely matched forms might be needed, but an elicitation paradigm could supplement what we have discovered from naturalistic speech.