

Sesotho Passives: The Long and Short of It

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1. Introduction

The crosslinguistic acquisition of the passive construction has been a topic of interest for many years. The Maturation Hypothesis (henceforth MH; Borer and Wexler 1987) states that children have difficulty with passives because their grammar lacks the relevant syntactic operations. Specifically, the MH claims that until about 5 years of age, children do not represent A-chains, a mechanism required for short and long passives, as grammatical (the A-Chains Deficit Hypothesis, or ACDH). Given more recent empirical data, Wexler (2007) claims that passives of all types are not fully acquired until around age 7. This finding of delayed passives has been found in English (Hirsch and Wexler 2004) and replicated in many languages, most notably Japanese (Sugisaki 1999), Dutch (Verrips 1996) and Spanish (Pierce 1992). Until this mechanism has matured, it is argued that children rely on alternate strategies when producing apparent passives.

One of the best-known counterexamples to the hypothesis comes from acquisition data from the Bantu language Sesotho (Demuth 1989, 1992). Based on spontaneous speech data, Demuth argues against the MH, claiming that Sesotho passives have A-chains and that children productively produce short and long passives of actional verbs as young as age 2;8. The data have been challenged (Crawford 2004). Furthermore, no experiments have been conducted to replicate the spontaneous speech findings.

The purpose of this paper is to test whether there is a crosslinguistic difference in the acquisition of passives, specifically, whether Sesotho-speaking children under the age of 7;0 have the knowledge to comprehend short and long passives of actional verbs. Surprisingly, the results provide support for both theories; the long passives results support the MH, while the results of short passives support Demuth's original claim. The organization of this paper is as follows: Section 2 gives background and Section 3 gives a description of the

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facts in Sesotho. Section 4 presents the experiment and results, and section 5 provides a discussion and avenues for further research.

2. Background

2.1 Maturation and syntactic homophones

A challenge for the MH has been to explain how a biological delay is possible in the face of evidence that suggests young children can produce certain types of passives. Early studies show that young children seldomly produce long passives (Baldie 1976), while at the same time they are producing short passives, or passives without a *by*-phrase (Horgan 1978). Hirsch and Wexler (2004) found that while children generally answered actives more accurately than passives (ME of voice: $F(1,59)=169.59$, $p<.0001$), the best performance was on short passives of actional verbs.

To explain the production of short passives in English, Borer and Wexler argue that children are using a strategy to avoid constructions with A-movement. They observe that in English, short verbal passives are homophonous with adjectival passives. Adjectival passives do not have A-movement, so children can use this as a strategy until the relevant syntactic mechanisms mature. The short passives produced in the literature are what Babyonyshev et al. (2001) call syntactic homophones (or s-homophones):

- (1) A phrase α is an s-homophone of β if α and β have distinct structure but common pronunciation. (p.7)

According to Babyonyshev et al, this strategy not only explains the early production of short passives, but also explains poor performance on long passives. On this account, long passives are bad in pre-mature English-learning children because English adjectives do not take *by*-phrases.

The availability of s-homophones also explains crosslinguistic performance on short and long passives in languages like Greek. In Greek, the short verbal passive is not homophonous with adjectival passives, and children perform quite poorly on them (Terzi and Wexler 2002). Additionally, Greek adjectival passives can take *by*-phrases, and children perform quite well on them, despite having the *by*-phrase.

Hirsch and Wexler (2004) have argued that pre-mature children interpret short verbal passives as resultant state passives, a particular kind of adjectival passive. This type of passive denotes an event that ends in a “target” state. In English these eventive readings are often homophonous with continuous actions and states, but not always (e.g., eventive *filled* vs. stative *full*).

2.2 Passives in Sesotho

Based on spontaneous speech data, Demuth (1989) argues against the MH. She claims that Sesotho passives have A-chains and that children productively

produce passives as young as age 2;8. As an indication of productivity, Demuth shows that children produce shifts between actives and passives of the same verb¹.

(2) 2;8 years

Ho th-o-e o tla-shap-uo-a!
 SM17 said-PASS-FV that SM FUT-lash-PASS-FV
 It is said that you will be lashed!

(3) Ke 'me o re o tla-o-shap-a

ke me ea re ng o tla-o-shap-a²
 COP mother REL say-REL SM FUT-OM-lash-FV
 it's mother who says she will lash you Demuth 1989:64

Demuth also finds no effects of passive length. She argues that children are producing long and short passives equally well. She shows that at 2;8, one child can alternate between the long and short forms of the passive:

(4) 2;8 years

'na ke kut-uo-e
 PN SM cut.hair-PASS-FV
 As for me, I've been given a haircut

(5) 'Na ke kut-uo-e ke nkhono oaka

PN SM cut.hair-PASS-FV by grandmother POSS
 As for me, I've been given a haircut by my grandmother Demuth 1989:62

To explain the difference between her results and English results, Demuth shows that passives are more frequent in the Sesotho adult speech than in English adult speech, and proposes that the higher frequency can account for the difference in the time of acquisition. For example, she shows that long passives are more frequent in adult Sesotho speech than in adult English--3.3% in Sesotho as compared to Brown's (1973) observation of 0% (Demuth 1989:65). Additionally, she claims that passives are more frequent in the input because there are more functions of the passive in Sesotho than in English. Unlike English, Sesotho subject *wh*-questions are either formed with a passive or with a cleft relative construction. Additionally, Sesotho is a symmetric passive language, meaning that both theme and goal arguments may become the subject of the passive of a ditransitive.

¹ SM=subject marker, OM=object marker, FV=final vowel, PERF=perfective, PASS=passive, T/A=tense/aspect, #=noun class number, GEN=genitive, NP=noun phrase agreement, PN=pronoun, CONT=continuous COP=copula, FUT=future, REL=relative, POSS=possessive, STAT=stative PRES=present

² target adult utterance

The Sesotho data have been challenged on empirical grounds. In a reanalysis of two children in the spontaneous speech corpus, Crawford (2004, 2005) shows that there is no systematic alternation between active forms and passive forms of the verb. For all the verbs used in the passive, few to none were used in the active, suggesting that the children are producing them as rote-learned forms.

Demuth also argues that her data are counterexamples because there are no alternate or s-homophone analyses available for passives in Sesotho. Crawford also found that some of the children's passives are homophonous with adversity passives, which in Japanese are argued not to have A-movement (Kubo 1992). She argued that if Sesotho adversity constructions have the same analysis as the Japanese constructions, it is reasonable to assume that these forms also do not have A-movement and therefore do not support the claim of early passives.

Most importantly, the Sesotho data is questionable as a true counterexample because there have been no experimental results that corroborate the spontaneous speech findings. Before getting to the experiment, a description of the Sesotho facts is necessary. As will be seen, aside from adversity passives, the lack of s-homophones for passives in Sesotho will determine how to interpret the results of the experiment.

3. Sesotho

3.1 Evidence for A-movement

Sesotho is a Bantu language with relatively free SVO word order. The Bantu verb stem is marked for subject agreement, optional tense and aspect, optional object agreement, and optional derivational morphology:

(6) SM-(T/A)-(OM)-verb root-(derivational morphology)-FV

Demuth's main argument for A-chains in Sesotho passives comes from changes in subject agreement. In the active sentence (7a), the subject marker agrees in noun class with the subject. In the passive (7b), the object *lijo* 'food' of noun class 8 has moved from object position to subject position. The subject agreement reflects this change: the subject marker now agrees with noun class 8--the logical object, and not the logical subject.

(7) a. Thabo **o**-pkeh-il-e lijo
 Thabo(**1a**) **SM1a**-cook-PERF-FV food(c18)
 Thabo cooked some food

b. Lijo; **li**-pkeh-il-o-e t_i (ke Thabo)
 Food(**8**) **SM8**-cook-PERF-PASS-FV (by T)
 The food was cooked (by Thabo)

Demuth 1989:59

This shows that the logical object is in an A-position from which it can trigger subject agreement. It is not clear whether the surface subject definitely originated in object position. It is known, however, that when the logical object stays postverbal, the subject marker does not agree with the logical object, but instead gets an ‘expletive’ subject marking: subject marking of locative class 17. These constructions are similar to an impersonal passive. There is also a difference in meaning; impersonal passives have a habitual reading (Zorc and Mokabe 1998).

- (8) ho pheh-il-e lijo ke batho
 SM17 cook-PERF-FV food by people
 Food is cooked by people
 lit., there is cooked food by people Demuth 1989:59

3.2 Morphological difference in short and long passives

It is important to note that there is a morphological difference between short and long passives in Sesotho. Short passives are not simply truncated versions of long passives; dropping the *by*-phrase makes the form ungrammatical. Instead, they require different subject agreement morphology, as seen in (11):

- (9) Ntate o sun-o-a ke mme
 Father SM1 kiss-PASS-FV by mother
 Father is kissed by mother. Long passive
- (10)*Ntate o sun-o-a
 father SM kiss-PASS-FV
 Father is kissed
- (11)Ntate oa sun-o-a
 father SM kiss-PASS-FV
 Father is being kissed Short passive

In the Bantu literature, the morpheme in (11) is called the long form (Buell 2005) or the disjunctive form (Meeussen 1959). The relevance of this morphology to the study will be addressed in the discussion.

3.3 Lack of s-homophones

Demuth (1989) claims that verbal passives are not s-homophones with adjectives in Sesotho. She explains that Sesotho has predicate adjectives, but that they are morphologically distinct from verbal passives. To clarify this point, when used attributively, deverbal adjectives have the relative morpheme:

- (12) monna **ya** bits-o-a-**ng**
 man **REL** call-PASS-FV-**REL**
 the man that was called (bitsoang=be named, called)

Following Hirsch and Wexler, it could also be argued that Sesotho passives are homophonous with resultant state adjectival passives, and are therefore predicted not to be delayed. In Sesotho, however, the different adjectival readings are not homophonous. Stative adjectival passives have an additional stative morpheme (13) and resultant state adjectival passives, ones that describe an event that has resulted in a state, have an additional perfective morpheme (14):

- (13) lentswe la hae le-utl-o-**ahal**-a
 voice GEN his SM-hear-PASS-**STAT**-FV
 his voice was heard (Lit., his voice was audible)

- (14) Lijo li-pheh-**il**-o-e
 Food SM-cook-**PERF**-PASS-FV
 The food has been/is in a state of having been cooked Demuth 1989:60

It is also possible that short passives in Sesotho are homophonous with other constructions in the language. Zorc and Mokabe (1998) have noted that the pre verbal morpheme *oa* used in short passives like in (7) is homophonous with a nominal reading. Based on this, Crawford and Hirsch (2008) argued that short passives in Sesotho are nominal constructions, having a meaning similar to *the kicking of brother*. This is not the case, however; passive nominals have a distinct structure, and when used as a verbal passive, the morpheme *oa* can be separated by continuous aspect:

- (15) [Ho rah-o-a hoa abuti]_{NP} ho a nts'oenya
 SM17 kick-PASS-FV REL17 brother SM17 PRES bother
 [The kicking of brother]_{NP} bothers me

- (16) [Taba ea hore abuti **o ntse a** rah-o-a]_{NP} ea ntena
 Fact that brother **SM CONT PRES** kick-PASS-FV SM PRES bother
 [The fact that brother is kicked]_{NP} bothers me

It is therefore not likely that there are s-homophones for verbal passives in Sesotho.

3.4 Summary and predictions

The facts of Sesotho provide a direct test of not only whether there is a crosslinguistic difference in the acquisition of the passive, but also for the s-homophone hypothesis for early passives. Young Sesotho-speaking children do

not have an alternate strategy to analyze verbal passives in their language. On the strict s-homophone version of the MH, we expect poor performance on BOTH long and short passives. Verbal passives are morphologically different from other types of passives, so short passives cannot be misanalyzed as other constructions. Likewise, the presence of a by-phrase in long passives will not block an alternate analysis, so the MH predicts that children will also have difficulties with this form.

4. The experiment

4.1 Method and stimuli

Subjects included 11 children, aged 5;0-6;0, and 10 adult controls. Subjects were taken from an English medium primary school in Maseru, Lesotho. All subjects were native speakers of Sesotho with Sesotho-speaking parents.

Subjects were given a Sesotho language version of the 2-choice picture task (Hirsch and Wexler, 2004). Stimuli were presented to the children on a computer, with test sentences recorded by native speaker of Sesotho (see Figure 1). Subjects were presented 4 actional verbs: *kuka* 'carry' *suna* 'kiss' *raha* 'kick' *sututsa* 'push'. Each verb was presented in the active, long passive and short passive twice for a total of 24 items³. Stimuli were presented in a different randomized order for each subject.

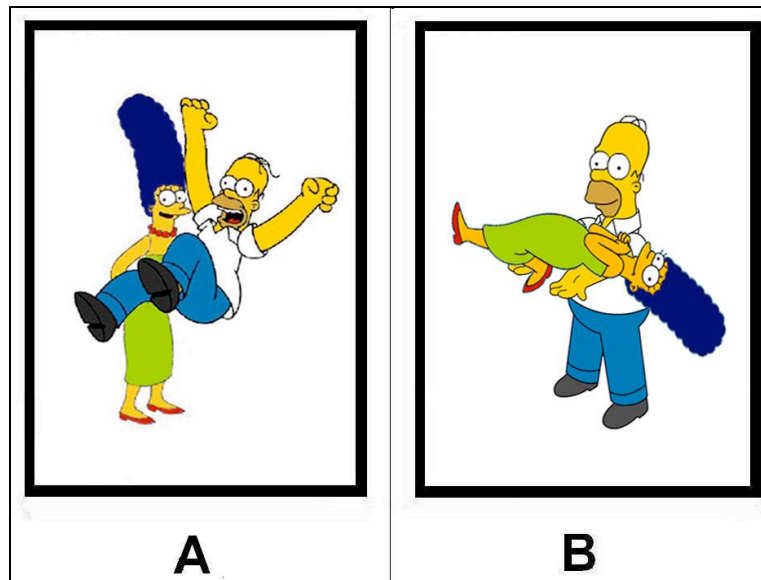


Figure 1. Example of stimuli for actional verb *kuka* 'carry'

³ Nonactional verbs were tested, but are not included in this analysis.

4.2 Results

4.2.1 Results of Analysis 1: Actives vs. actional long passives

Recall that the MH predicts adults and children to perform differently on long passives as compared to actives, while a non-maturational theory predicts no significant difference between actives and long passives.

A repeated measures ANOVA crossing voice (actional actives vs. actional long passives) with age (children vs. adults) as a between subjects factor shows a highly significant main effect of voice ($F(1,19)=23.5, p<.001$), a main effect of age ($F(1,19)=28.7, p<.001$), and a highly significant interaction of voice and age ($F(1,19)=20.1, p<.001$).

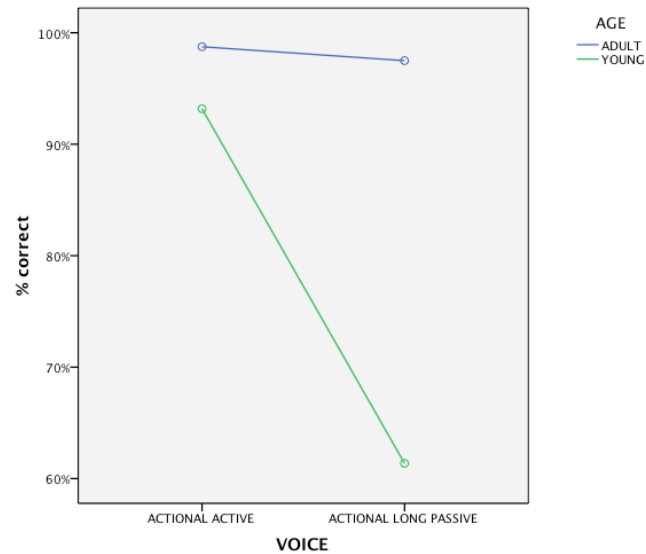


Figure 2. Actives and long passives

4.2.2 Results of Analysis 2: Actives vs. actional short passives

As Sesotho short passives are not strict s-homophones of resultant state or other types of adjectival passives, the predictions for children's performance is the same as in Analysis 1: MH predicts a significant difference of performance on short passives as compared to actives. In this ANOVA, there is a clear effect of voice ($F(1,19)=7.0, p=.016$), but there is no suggestion of an interaction between age and voice ($F(1,19)=.02, p=.896$ NS). Moreover, the gap between adults and young children is only marginally significant ($F(1,19)=3.8, p=.067$).

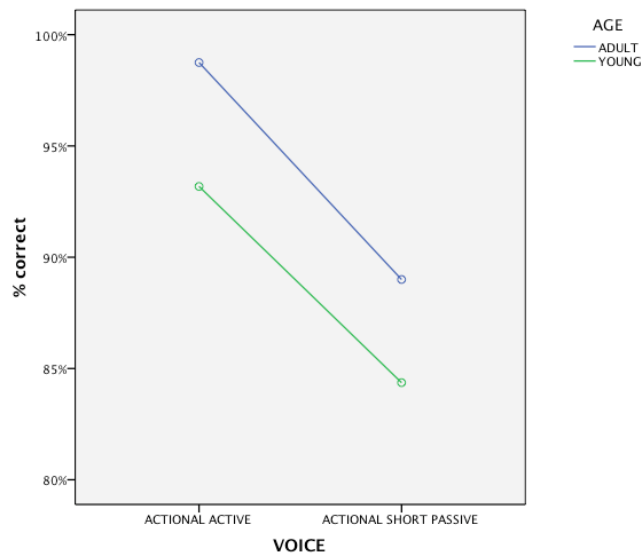


Figure 3. Interaction of voice and age, 5-6 year olds and adults

5. Discussion

This study addressed the crosslinguistic acquisition of the passive with respect to Sesotho. The results of Analysis 1 show that children perform significantly better on active verb items than on long passives. This result is compatible with the predictions of the MH. Following Fox and Grodzinsky (1998), children’s difficulties with long passives may stem from the fact that Sesotho does not allow a *by*-phrase to assign a theta role to its complement (Demuth and Kline 2008). Alternatively, the logical object must move past the agent NP in long passives, resulting in a violation of relativized minimality (Snyder and Hyams, in progress).

The result of Analysis 1 should be taken with the caveat that further testing on long passives might yield different results. It seems to be the case that studies that use the two-picture choice methodology have found poor performance on long passives of both actional and non-actional verbs (see results of Maratsos et al. (1985) and Hirsch and Wexler (2004, 2006)). In an elicited production task, however, Crain, Thornton and Murasugi (1987) found children could perform quite well on long actional passives. In Truth-Value Judgement Tasks (TVJT), Fox, Grodzinsky, and Crain (1995) and Fox and Grodzinsky (1998) found good performance on long passives of actional verbs.

In another study using the TVJT, O’Brien, Grolla, and Lillo-Martin (2006) find that 3- and 4- year olds can also perform well on long *non-actional* passives. O’Brien et al. reason that felicity conditions could be the reason children do poorly on long passives, and made their TVJT stimuli salient for

multiple *agents*. When they controlled this aspect of the stimuli, they found that children responded significantly better not only on long passives of actional verbs, but also on long passives with the non-actional verb *see*. Takahashi (2008) has found a similar result in Japanese, where controlling for felicity conditions improves children's performance on long passives. Given that experimental factors seem to make a difference, the results of Analysis 1 should ideally be replicated across methodologies.

Unlike Analysis 1, the results of Analysis 2 are not compatible with the predictions of the MH. While children responded more accurately to active items than short passive items, they did not do so in a way significantly different from adults. This result is especially surprising given that the stimuli used here were not strict s-homophones with resultant state or any other type of adjectival passives. This result is compatible with Demuth's original claim that passives are unproblematic for Sesotho-speaking children.

The question of adult performance is relevant to Analysis 2, since the adults were not at ceiling performance on the short passives, while they were on long passive items. Recall that Hirsch and Wexler's adults were not 100% on the passive stimuli. That there is not a significant difference between adult and children's performance suggests that whatever is making the short passives more difficult than actives is not disproportionately difficult for the children.

In order to make the results of Analysis 2 compatible with Maturation, future research will have to determine the extent to which children make use of alternate strategies when hearing a passive. The result is not compatible on a strict s-homophone analysis, though a weaker version may change how we interpret the results. Future research should also test Sesotho-speaking children's knowledge of the other passive forms described here. The MH expects better performance on the perfective adjectival passive forms because they indicate a resultant state.

There is also a question of whether the differing preverbal morphology on long passives (short/conjunct form *-o-*) and short passives (long/disjunct form *-oa-*) can explain the difference in results. Demuth (1992) and traditional grammars (Cole 1952) argue that the long/disjunct form is inserted for phonological reasons when the verb is final in its phrase. It is also possible that this morphology could also be an indication of different syntactic processes. Buell (2006) argues that the long/short alternation is an indication of constituency, while Creissels (1996) argues that the morphology alternation is associated with focus properties of the element following the verb. For example, he suggests that the short/conjunct morphology on long passives indicates that the postverbal element, in this case the *by*-phrase, is in focus. I leave these questions to further research.

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