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Grammaticality judgements of tense by young adult speakers of Shona

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Abstract: This study examined grammaticality judgements of tense by 40 young adult native speakers of Shona during an online task. This study reports response accuracy and reaction times on the reading of time reference violations in which verb forms do not match a time frame previously set by an adverb. The judgements were elicited using 240 sentences with and without grammatical violations during an online reading task. Overall, in the experimental task, the native speakers performed below 78% across the four conditions, despite the sentences having received acceptability ratings of 1 = acceptable, 2 = unacceptable for grammatical and ungrammatical sentences, respectively. Sentences with the violation of the recent past by remote past tense verb had the lowest response accuracy scores. The participants also took the longest time to detect the errors in this same condition, meaning sentences with the recent past adverb context had the lowest response accuracy, with the sentence with the recent past context and remote past tense verb violation the most difficult to detect. The participants were quicker in detecting errors in the sentences with the remote adverb context and recent past tense verb. The findings demonstrate the utility of grammaticality judgement tasks for revealing language processing difficulties.

Introduction

Languages have different ways of expressing and marking the concepts of past, present and future. In agglutinating Bantu languages such as Shona, reference to different time points is made through inflectional grammatical prefix morphemes on verbs (Mkanganwi 2002). Akan, a Niger-Congo language spoken in Ghana, marks time reference using grammatical tones (Tsiwah et al. 2020; Tsiwah et al. 2021). However, other languages', such as Chinese, reference to the past, utilising free standing grammatical morphemes and verbs, are not inflected. Standard Indonesian, Thai and Chinese refer to the concept of time reference using aspectual adverbs instead of tense inflection (Tsiwah et al. 2021). In Indo-European languages such as English, this may occur through inflecting the verb with suffixes. Examples in English include, past tense 'he bath*ed*', continuous forms 'he has been bath*ing*' and 'he was bath*ing*' (Dragoy et al. 2012).

Data from aphasiological studies has demonstrated that inflections are not impaired to the same extent in patients with agrammatism (Faroqi-Shah and Dickey 2009; Dragoy et al. 2012). There is evidence in the extant literature which demonstrates that the production of noun plural morphology is generally more preserved than the production of verb morphology in patients with agrammatism, a common symptom of aphasia after suffering from brain damage (Goodglass et al. 1993; Milman et al. 2008; Faroqi-Shah and Dickey 2009). Agrammatism, is a form of speech production where patients with Broca's aphasia appear to have difficulties accessing grammar, including using morphological inflections (O'Connor et al. 2005). In these cases, tense morphology has been observed to be badly affected (Faroqi-Shah and Dickey 2009; Dragoy et al. 2012).

Studies on how languages express time through verb inflection, as in the case of English, or through free grammatical morphemes as in Chinese, or with grammatical tone, as in Akan, have been shown to be impaired in individuals with the syndrome of agrammatism (Bates et al. 1987; Miceli et al. 2002; Faroqi-Shah and Thompson 2003; 2006; Bastiaanse et al. 2009; Dragoy et al. 2012; Tsiwah et al. 2020). It has been argued that reference to the past seems particularly more impaired compared to other tenses, such as the present tense (Bastiaanse et al. 2011; Dragoy and Bastiaanse 2013; Martínez-Ferreiro and Bastiaanse 2013; Bos and Bastiaanse 2014; Tsiwah et al. 2020). One

hypothesis that has been put forward to account for the past and present processing differences is the past discourse linking hypothesis (PADILIH; Bastiaanse et al. 2011; Bastiaanse 2013). This account posits that reference to the past, for instance, through tense inflection, is selectively impaired since it requires discourse linking. PADILIH argues that when referencing the past, there is a need to link the time of speaking and the event time, since they do not align. On the other hand, if the time of the event and referencing to the present coincide, there is no need for discourse linking. Therefore, it has been argued that processing past time reference requires more resources than present time reference.

Although observations that the past tense was more difficult to process than the present tense were first noted from studies with patients with brain damage, it has also now been established that the past tense also seems more difficult to process than the present tense in healthy participants (Faroqi-Shah and Dickey 2009; Dragoy et al. 2012; Arslan et al. 2017; Tsiwah et al. 2021). One way that this has been demonstrated is through behavioural data such as reaction times (RTs). Generally, reaction time data is interpreted at different levels of complexity by how long participants take to process different sentence structures, for instance, through differentiating the processing of present tense and past tense. Healthy and agrammatic individuals had longer RTs for verb forms referring to the past than for those referring to the present (Jonkers et al. 2007; Faroqi-Shah and Dickey 2009; Bastiaanse et al. 2009, Tsiwah et al. 2021). Using a grammaticality judgment using sentences with adverb-verb morphology mismatches e.g., **Tomorrow, he walked; *Yesterday, the boy eats the apple,* both healthy speakers and brain-damaged individuals demonstrated shorter reaction times when the violation of verb forms referred to the present rather than to the past (Faroqi-Shah and Dickey 2009). In these types of mismatches, the sentences contain verb forms that violate the temporal context set by the adverbs.

The current study is the only known study to investigate sentences with adverb-verb mismatches using a grammaticality judgement task in Shona. Akan is the only other African language where time reference has been studied, but as earlier highlighted, Akan marks time reference through grammatical tone, whereas Shona uses prefixes. A grammatical judgement task is a method commonly used in language acquisition or psycholinguistics which involves, for instance, reading or hearing a sentence and being asked to judge whether it is acceptable (grammatical) or not. The current study is crucial because most of the studies that have studied adverb-verb mismatches have been on languages such as English, Turkish, Dutch and Akan. It has been argued that most of what we know comes from certain languages, mainly those which use suffix tense morphology (Klein 2009). Shona uses inflectional prefix morphemes to mark tense morphology, whereas English marks with suffixes. Shona also presents different grammatical features such as making a distinction between recent past and remote past using tense morphology. The goal of this study is to investigate whether and why some healthy young adult native Shona speakers may find the past tense more difficult to process than the present tense.

Tense in Shona

Toews (2009) notes that tense expresses the time, whether in the past, present, or future, that an event takes place, while reference time refers to the time that is relevant in the discourse. Shona utilises absolute tense, that is, a temporal category that locates when an event took place to an extra linguistic reference point. Absolute tenses locate the time of the event in relation to the time of utterance. Shona is an agglutinating language that marks and inflects for tense, among other categories (Mkanganwi 2002). Tense is a grammatical category that expresses when an event takes place in relation to some other temporal reference point in time (Dowty 1982; Klein 1994; Toews 2009). Events are usually located before, after, or during the deictic centre, normally the present, unless there is a clear indication to the contrary (Comrie 1985). There are three basic absolute tenses, that is, present, past and future.

Present tense in Shona

The present tense indicates an event which takes place at the time of speaking. Shona does not use an overt morpheme marker for present tense (Erickson 1988). The present tense in this case involves the use of an auxiliary of the defective type plus an infinitive.

(1) '*ndiri kubika mupunga*'
ndi- ri ku - bik - a mupunga.
1SG to be INF- walk- FV rice.
'I am cooking rice'

Past tense

Shona has an inflectional past/present distinction. Past tense indicates the location of the event prior to the present moment. Shona makes a further distinction within the domain of past time reference by marking remoteness in time distinctions. Shona has a *recent past* grammatical morpheme *-a-*, and *-ka-* marks the *remote past*. The recent past refers to actions or states that happened recently before the time of speaking, but on the same day of speaking, for example:

(2) '*Ndabika mupunga*'
nd - a - bika - a mupunga.
1SG- REC-PAST -cook- -FV rice
'I cooked rice.'

In relation to the day of speaking, the remote past tense refers to events that took place before the day. It marks a clear separation between the present moment and the past, for example:

(3) '*Ndakabika mupunga*'
nda - ka - bik- a mupunga.
1SG- REM-PAST- cook FV rice
'I cooked rice'

This tense is naturally translated by the simple past in English. Like in English, it is often accompanied by precise markers of time such as the date, day, month, or year. The markers of time, or adverbs of time, such as 'today, yesterday, tomorrow, last week, next week', generally go with a certain tense, with adverbs such as 'yesterday' occurring with remote past tense marked verbs. Adverbs such as 'today' are used with recent past tense forms in Shona, while adverbs such as 'tomorrow' are used with future tense forms.

This study reports behavioural data (response accuracy and reaction times) on the reading of time reference violations in which verb forms do not match a time frame previously set by an adverb:

(i) Remote adverb–remote past verb tense (RemRem);
(ii) *Remote adverb–recent past verb tense (RemRec);
(iii) Recent or present adverb–recent past verb tense (RecRec);
(iv) *Recent or present adverb–remote past verb tense (RecRem).

The study investigated the proficiency of Shona speakers in reading (a) perfectly grammatical sentences of Shona in the two different time forms of present and past, and whether they could detect (b) sentences with violations to the tense that is supposed to be used in relation to the time reference established by the previous adverb (see Tables 1, 2 and 3 for examples).

Method

Participants

Forty native speakers of Shona participated in this experiment. The native speakers in this study are speakers who were exposed and acquired Shona from birth, which means that they speak Shona

Table 1: Examples of the four experimental conditions

Condition	Adverb		Verb		
RemRem	*Svondo rakapera*	*murwere*	*a**ka**pihwa*	*mapiritsi*	*nachiremba.*
	Last week	the patient	was given	pills	by the doctor.
*RemRec	*Svondo rakapera*	*murwere*	***a**pihwa*	*mapiritsi*	*nachiremba.*
	*Last week	the patient	has been given	pills	by the doctor.
RecRec	*Nhasi masikati*	*murwere*	***a**pihwa*	*mapiritsi*	*nachiremba.*
	Today in the afternoon	the patient	has been given	pills	by the doctor
*RecRem	*Nhasi masikati*	*murwere*	*a**ka**pihwa*	*mapiritsi*	*nachiremba.*
	*Today in the afternoon	the patient	was given	pills	by the doctor.

Table 2: Four experimental conditions

Condition	Time reference in adverb	Time reference in verb
RemRem	Past	Remote past
*RemRec	Past	Recent past
RecRec	Present	Recent past
*RecRem	Present	Remote past

Table 3: Examples of control sentences per type (C = control; F = fillers)

Condition	Example
Future Adverb-Future Tense) **C**	*Gore rinouya, jaya richanotsvaga basa muguta.* [lit.] Year next, the young man will go and look for a job in the city. Next year, the young man will go and look for a job in the city.
Grammatical violation) **F**	*Kusweramangwana, amai **ri**chapa mwana mari.* [lit.] The day after tomorrow, mother *give child money. **The day after tomorrow, mother *give child money*
Semantic violation) **F**	*Gore rinouya, **mupoto mucharimwa** chibage nababa.* [lit.] Year next, in the pot will be ploughed corn by the father. *Next year, in the pot will be ploughed corn by the father.

as their first language. These L1 speakers were students between 19 and 30 years old who were studying at the University of Zimbabwe. The speakers had a minimum C-pass grade in Shona after taking the Ordinary Level Examination. The participants were evenly distributed over the four lists, and there were five men and five women (see Appendix 1 for stimuli examples). All the participants were right-handed, had no diagnosed neurological impairment or psychiatric disorder, had normal or corrected vision and reported no usage of recreational drugs, medications or alcohol that could affect their performance in the experiment. The participants signed an informed consent according to the Declaration of Helsinki under a procedure approved by the Human Research Ethics committee at Illinois State University, IRB 2022.409.

Materials

Each participant read 80 experimental sentences. 40 of them had verb forms which did not match a time frame previously set by an adverb (past adverb-recent past tense; present adverb-remote past tense). There were 80 control sentences and 80 fillers (see Tables 1, 3 and Appendix 1). The experimental sentences were presented in four conditions as illustrated in Table 1: correct sentences with an adverb preceding a verb, both referring to the past (RemRem); violation sentences with an adverb referring to the past preceding a verb referring to the recent past (RemRec); correct sentences with an adverb preceding a verb, both referring to the present (RecRec); and violation sentences with an adverb referring to the present preceding a verb referring to the past (RecRem).

Acceptability of materials

Ratings on the acceptability or unacceptability of the sentences were obtained from 40 native speakers of Shona. None of the raters participated in the experiment. The participants rated the experimental, control and filler sentences using an online rating survey. The participants read the sentences in the survey and judged their acceptability or unacceptability. For the *grammatical* sentences to be used in the experiment, they had to be rated = 1 and the *ungrammatical* sentences had to be rated as = 2. The participants had no time limit to complete the task. The sentences used in the online task were only used if they reached those criteria of either being correctly rated as 1 = grammatical/acceptable, or 2 = ungrammatical/not acceptable. All 240 sentences used in the experimental task were rated either as 1 = grammatical/acceptable, or 2 = ungrammatical/unacceptable.

Procedure

During the online task, participants were tested in a dimly lit sound-attenuated room sitting at approximately 80 cm distance from a computer screen. Programming and presentation were done using E-prime Psychology Software Tools Inc 2002 (Schneider et al. 2002). The sentences were presented visually, word by word, in the middle of the computer screen, in black on a white background, with 12 pt font size. At the beginning of each sentence, an asterisk marking the fixation point appeared for 500 ms. Each word was presented for 500 ms, followed by a blank screen of the same duration. At the end of each sentence, a blank screen appeared for 3 000 ms, giving the participant time for any delayed responses. Participants were instructed to read each sentence carefully and to respond as soon as they detected an error by left clicking on the mouse. Sentences were presented in four blocks of about 10 minutes each. At the end of the block, participants were given a short break. The total testing time was about 40 minutes. This procedure was adapted from the study by Dragoy et al. (2012).

Results

A paired sample test was used to analyse the accuracy and reactions times of the participants to the four conditions. The response accuracy and reaction times of the participants (see Table 4) to the experimental sentences were analysed. The participants judged the grammatical sentences (conditions RecRec and RemRem) as acceptable in 67% and 77% of the trials (i.e. the participants successfully managed to identify that these sentences did not have any errors). A difference was found between the two conditions: t (3.533), df = 39, $p < 0.001$. This was interesting because these sentences had been rated as acceptable sentences through the plausibility ratings. It should be noted though that the participants generally took between one to three hours to successfully complete the plausibility rating exercise.

The response accuracy of the ungrammatical sentences also showed a difference between the two conditions (RemRec and RecRem): t (3.968) $p < 0.0001$. The results show that the violation of a recent-time adverb by remote past tense was harder to detect. The participants judged the conditions *RecRem and *RemRec as unacceptable sentences in 58% and 69% of the trials respectively (i.e. the participants correctly responded that the sentences were ungrammatical). Again, this was unexpected because these ungrammatical sentences had been detected as incorrect sentences, albeit that it had taken longer to successfully complete the grammaticality rating exercise.

The same finding that participants found it harder to reject sentences with grammatical violations in the RecRem than RemRec were also found in Reactions Times (RTs). The mean RT in the two conditions was 1 514.79 ms and 1 275.76 ms. The results demonstrate that violations of a recent time adverb by past tense (*RecRem) were detected later than violations of a remote time adverb

Table 4: Response accuracy scores and reaction times

	Adverb Recent–Verb Recent (RecRec)	*Adverb Remote–Verb Recent * (RemRec)	Adverb Remote–Verb Remote (RemRem)	*Adverb Recent–Verb Remote *(RecRem)
Accuracy	0.67	0.69	0.77	0.58
Reaction times		1 275.76 ms		1 514.79 ms

by a recent past tense verb (*RemRec). This difference was statistically significant: t (4.12) df = 40, $p < 0.0001$.

A comparison of the response accuracy between grammatical (RecRec) and ungrammatical (*RecRem) conditions (i.e. sentences with an adverb indicating recent past which is naturally supposed to be followed by a recent past tense showed a difference, t (3.968) df = 39, $p < 0.0001$. The results show that there was no difference between sentences with a recent adverb context with a recent tense verb (67%) versus a remote adverb context followed by a remote past tense verb (69%).

Summary of results

Sentences with the violation of the recent past by remote past tense verbs had the lowest response accuracy scores (i.e. the most difficult to detect errors, or reject as ungrammatical). This replicates the results from Dragoy et al. (2012). The participants also took the longest time to detect the errors in this same condition, meaning sentences with the recent past adverb context had the lowest response accuracy, with the sentence with the recent past context and remote past tense verb violation the most difficult to detect. The participants were quicker to detect errors in the sentences with the remote adverb context and recent past tense verb.

Overall, the response accuracy of the participants was below 78% in all four conditions during the online task, compared to the 100% acceptability rating of the sentences during the rating task. All the four conditions had been judged as either grammatical or ungrammatical (i.e. acceptable or unacceptable) in the rating task. The experimental online task had the additional restricted time element and the whole experiment took 40 minutes, whereas the rating task had no time restriction element and took the participants between one and three hours. The response times and response accuracy results therefore suggest that recent past context time violations by a remote verb are not identified as quickly as past time violations by a present tense verb.

Discussion

Results from this study have provided us with insights into the processing of time reference in Shona speakers. The aim of the present study was to contribute to the understanding of whether and how adverb-verb mismatches in adult Shona speakers are affected during sentence processing, and if they are, then accounting for why some healthy young adult native Shona speakers also find the past tense more difficult to process than the present tense. In the section below, this will be addressed in relation to previous time reference studies (Jonkers et al. 2007; Faroqi-Shah and Dickey 2009; Dragoy et al. 2012; Tsiwah et al. 2021).

Time reference studies have demonstrated that reference to the past is more difficult to process than reference to the present when there are mismatches between the time set by the verb and the temporal context set by the adverb. Dragoy et al. (2012) demonstrated that time reference violations by past tense verbs were noticed later by participants than time reference violated by present tense verbs. Results from the present study replicated results from Dragoy and colleagues' study. It was demonstrated in Shona that violations of the recent past temporal context by past tense verbs took the longest time to detect, and participants were faster to detect errors when a remote adverb context was violated by a recent past tense verb.

These results are also supported by findings from Faroqi-Shah and Dickey (2009) who demonstrated that using a grammaticality judgement task, it takes more time to judge violations of a present temporal context with a past tense verb than the past temporal context with a present verb. All these findings align with those of Jonkers et al. (2007), who demonstrated that participants require longer times to produce a complete sentence when the verb contains a past rather than with a present form. Dragoy et al. (2012) argue that the fact that violations by the past tense verbs take longer to detect and result in more errors points to a type of processing that demands more effort on the part of the speakers and also sees reaction time delays and more errors.

The present Shona study demonstrated that more errors were produced when the past tense verb condition violated the present temporal context than vice versa. This finding also corroborates findings from previous studies which demonstrated that participants were more accurate in detecting errors when there were present tense violations rather than past violation situations (Jonkers et al.

2007; Faroqi-Shah and Dickey 2009; Dragoy et al. 2012; Tsiwah et al. 2021). The findings in this study are in line with the prediction from the past discourse linking hypothesis (PADILIH: Bastiaanse et al. 2011; Bastiaanse 2013). PADILIH posits that referencing the past, whether through tense inflection or aspectual information, requires discourse linking. It argues that when referencing the past, there is a need to link between the time of speaking and event time since they do not align, whereas, when referencing the present and the time of the event coincides, this eliminates the need for discourse linking. Hence, it has been argued that more resources are required when processing past time references in comparison to processing present time references.

Although findings in this article are parallel to the previous studies on time reference mismatches, in general, Shona speakers struggled to accept well-formed sentences and reject malformed sentences with high levels of certainty. As demonstrated by the results, the participants could not consistently and accurately accept the sentences that did not have any violations, or reject the sentences that had violations. However, native Shona speakers could do so with a higher level of accuracy in the acceptability rating task albeit with unlimited time to complete the task. This perhaps demonstrates that the Shona speakers' parsers when placed under stress due to the time constraints, speakers tend to inconsistently detect errors and accept well-formed sentences. The accuracy of the Shona speakers was below 78% across all four conditions, contrary to findings from previous studies that report above 90% accuracy across conditions (Faroqi-Shah and Dickey 2009; Dragoy et al. 2012; Arslan et al. 2017; Tsiwah et al. 2021). As highlighted earlier, it took some of the participants up to three hours to complete the task when the time completion restrictions were not present. These findings point to the difficulty in processing Shona sentences in general under limited time constraints.

The overall unexpected performance in the Shona speakers under time constraints could partially be explained by insensitivity to time reference violations possibly due to transfer effects from English, which is their L2. English lacks the distinction between recent past tense and remote past tense as indicated by inflectional morphology. This might account for why, in general, the Shona speakers struggled in this study as they may have been doing direct translations from English. Results in this study indicate that the participants performed the best in the L2 equivalent simple past RemRem (77%) and worst in the *RecRem (58%), the one with the recent past context violated by a past verb, indicating that they accepted ungrammatical sentences almost by chance for a structure not morphologically marked in their L2.

It should be noted that what have been considered violations in this study could initially also not be considered as violations by readers until they realise that there is no more forthcoming information and that the sentence is complete, which necessitates a re-analysis of the words. This naturally leads to a longer reaction or deciding time. This is because in the materials used in this study, for instance, as demonstrated by the two examples from Table 1, '*Svondo rakapera murwere apihwa mapiritsi nachiremba*', could initially have been interpreted as 'Last week, after the patient was given pills by the doctor' instead of the correct reading 'Last week, the patient was given pills by the doctor', and '*Nhasi masikati murwere akapihwa mapiritsi nachiremba*' as 'Today in the afternoon if the patient is given pills by the doctor' instead of the correct reading 'Today in the afternoon the patient was given pills by the doctor" as a result of a change in tone placement while trying to make sense of the sentence only to realise that results in an incomplete sentence and then they revert to the original intended meaning. However, both alternate structures, which could have been plausible sentences because of different tone placement on the second and third syllables ***apihwa*** in bold, and remote past tense marker in ***aka****pihwa*, would require additional information for them to be interpreted as acceptable sentences. It is only when the participants realise that there is no more forthcoming information that this leads to what Dragoy et al. (2012) refer to as late effect where participants require additional time to process the structure presented to them.

These structures require the participants to hold all this information in memory before re-analyses are instantiated and this could result in more errors as some participants may not always remember the whole sentences since they were presented visually one word after the other without a chance for them to view them again. The alternate readings are the marked sentences, whereas the tense violation readings are the unmarked sentences. The alternate readings would only be activated when there were mismatches between the temporal context and the tense in the verb. That said, it should

be noted that this would affect both violation sentences, and the findings from this study demonstrate that past violations of a recent temporal context result in more errors and take longer to determine, even when these possible alternate decisions are consistent with past findings (Jonkers et al. 2007; Faroqi-Shah and Dickey 2009; Dragoy et al. 2012; Tsiwah et al. 2021).

Limitations of the study

The main goal of the study was to investigate tense processing in Shona speakers. For this purpose, the study used only one group of young adult speakers. To fully explore why the participants' performance deviated from the overall expected good performance, different age groups can be added to the same design for comparison. To further examine tense processing in Shona and to further probe the effect of the words activating at least two possible structures due to different tone placement on the prefixes marking tone, an important consideration will be to use auditory tasks instead of visual (reading) tasks during the grammaticality judgement. This will eliminate the garden-path effect when processing these sentences. The present study is the first to suggest tense morphology processing difficulties under time constraints in Shona, which opens the possibility for future studies.

Conclusion

The findings from the current study indicate that, overall, Shona speakers found the time reference violations to a recent past temporal context more difficult to process than those with a remote past temporal context violated by a present tense. Additionally, overall, the young adult Shona speaker's performance was unexpected when processing Shona sentences under time constraints. It has been argued that the speakers' poor performance across all conditions can be explained by difficulties in processing the sentences under time constraints. These time-processing-induced difficulties when reading Shona sentences result in the failure to consistently detect errors in sentences with grammatical errors, and instead accept well-formed sentences.

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APPENDIX 1: EXAMPLE STIMULI

Corr = Correct, Incorr = Incorrect
***RemRec:** Remote Adverb–Recent Past Verb Tense
***RecRem:** *Recent or Present Adverb–Remote Past Verb Tense
RecRec: Recent or Present Adverb–Recent Past Verb Tense
RemRem: Remote Adverb–Remote Past Verb Tense

corr	*Svondo*	*rinouya,*	*musangano*	*uchatanga*	*masikati*	*pamuzinda*
incorr	*Kuswera*	*mangwana,*	*vanhukadzi*	*dzichasangana*	*kumusangano*	*mudunhu*
RemRec	*Chipiri*	*chapera,*	*musikana*	*asona*	*dhirezi*	*remuchato*
corr	*Gore*	*rinouya,*	*VaMugabe*	*vari*	*kukwikwidza*	*hupurezidhendi*
incorr	*Mangwana*	*masikati,*	*mupoto*	*mucharimwa*	*chibage*	*nababa*
corr	*Izvozvi,*	*vanhu*	*vari*	*kufamba*	*netsoka*	*mumugwagwa*
RecRem	*Muawa*	*radarika,*	*Rutendo*	*akaona*	*firimu*	*mubhayisikopo*
RemRec	*Muvhuro*	*wapera,*	*sekuru*	*vanwa*	*hwahwa*	*kundari*
incorr	*Nhasi*	*masikati,*	*amai*	*riri*	*kutenga*	*chikafu*
incorr	*Mazuva*	*ese,*	*vasikana*	*dzinopurira*	*chibage*	*paruware*
RecRem	*Muawa*	*radarika,*	*vashandi*	*vakapihwa*	*mari*	*nemurungu*