

## Conditional clauses in Swahili to English machine translation

Arvi Hurskainen  
Department of World Cultures, Box 59  
FIN-00014 University of Helsinki, Finland  
[arvi.hurskainen@helsinki.fi](mailto:arvi.hurskainen@helsinki.fi)

### Abstract

The conditional clause expresses a constraint, which must be fulfilled so that the object of the main clause can be realised. In English, conditional clauses are initiated with the conjunction 'when' or 'if'. These conjunctions may be preceded by premodifying elements, but they are followed by the conditional clause. 'When' refers to a temporal constraint, while 'if' initiates a more general constraint. The conditional clause can be in various tenses, such as present, past and future. In Swahili there is more ambiguity in expressing condition, and this fact poses problems in machine translation. This report deals with such problems.

**Key Words:** *machine translation, conditional clause, disambiguation.*

### 1 Introduction

Swahili and English have quite different ways of expressing condition. There are basically two types of condition. The conjunction 'when' initiates a condition that refers to time. The conjunction 'if' initiates a more general condition. Furthermore, the conditional clause can in different tenses, such as present, past and future. In English the distinctions are explicit, but Swahili has a lot of ambiguity. The distinction between 'when' and 'if' types clauses is not clear. Also the tense is not obvious in certain types of relative clauses; it is revealed only in the following main clause.

The word order in conditional clauses is also different in these two languages. Particularly problematic is the condition marker in Swahili, because it is hidden inside the verb structure, sometimes as an aspect marker, and in other cases as a relative marker of time or location.

### 2 Types of Swahili conditional marking

Swahili has a special aspect mark *-ki-* that is used in conditional clauses. It is located in the slot where tense/aspect/mood markers are inserted. This marker is in two ways ambiguous. First, it stands for the temporal condition ('when' in English), but it also stands for the general condition ('if' in English). Second, it does not mark the time in any way.

Swahili has also aspect markers *-nge-* and *-ngali-* that can be used in conditional clauses. These markers are generally translated so that *-nge-* is translated as 'would' and *-ngali-* is translated as 'would have'. When used in the conditional clause, the same marker must be in the verb of the main clause. In addition to be used in conditional clauses, these forms can also be used alone in the sentence.

## 2.1 Conditional sentences with the *-ki-* marker

When we translate a sentence with the *-ki-* marker into English, we have to resolve both types of ambiguity, because English makes the when/if distinction and the time distinction explicit.

Using selected example sentences, I will show below step by step how these ambiguities can be handled. In (1) we see the analysis result of the sentence *Profesa Lipumba akieleza sababu nyingine za Ukawa, alitoa hotuba yake hadharani.*

(1)

```
"<*profesa>"
  "profesa" N 9/6-SG HUM { the } { professor } MALE HUM CAP
  "*profesa" N TITLE { *professor } AN HUM CAP
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
  "lipumba" <Heur> N 9/10-SG { lipumba } CAP
"<akieleza>"
  "eleza" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { he } COND-IF PAST { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } COND-IF PR:na { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } COND-IF PAST { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } COND-IF FUT:ta { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { he } PR:a 7-SG-OBJ OBJ { it } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } PR:a 7-SG-OBJ OBJ { it } z
[eleza] { explain , describe , elucidate } SVO PREFER
"<sababu>"
  "sababu" N 9/10-SG { the } { reason , cause , motive }
  "sababu" N 9/10-PL { the } { reason , cause , motive }
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 9-SG NOART { another }
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other }
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { others }
  "ingine" PRON :ENGINE 9-SG NOART { another }
  "ingine" PRON :ENGINE 10-PL NOART { other }
```

```

    "ingine" PRON :ENGINE 10-PL NOART { others }
"<za>"
    "za" GEN-CON 10-PL { of }
"<*ukawa>"
    "*ukawa" N PROPNAME SG { *ukawa }
    "wa" V 1-SG2-SP VFIN { you } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
    "wa" V 3-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA SV
MONOSLB CAP
    "wa" V 11-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
"<,>"
    ", " COMMA { , }
"<alitoa>"
    "toa" V 1-SG3-SP VFIN { he } PAST z [toa] { give , publish ,
put out } SVO
    "toa" V 1-SG3-SP VFIN { she } PAST z [toa] { give , publish
, put out } SVO
    "toa" V 1-SG3-SP VFIN { he } PR:a 5-SG-OBJ OBJ { it } z
[toa] { give , publish , put out } SVO
    "toa" V 1-SG3-SP VFIN { she } PR:a 5-SG-OBJ OBJ { it } z
[toa] { give , publish , put out } SVO
"<hotuba>"
    "hotuba" N 5/6-SG { the } { speech }
    "hotuba" N 9/10-SG { the } { speech , address , discourse }
    "hotuba" N 9/10-PL { the } { speech , address , discourse }
"<yake>"
    "ake" PRON POSS 4-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PLSG SG3 { his , her , its }
    "ake" PRON POSS 9-SG SG3 { his , her , its }
"<hadharani>"
    "hadhara" N 9/10-SG { in } { the } { :open space } LOC
    "hadhara" N 9/10-SG { on } { the } { :open space } LOC
    "hadhara" N 9/10-PL { in } { the } { :open space } LOC
    "hadhara" N 9/10-PL { on } { the } { :open space } LOC
"<.$>"

```

We see that the verb *akieleza* contains the conditional marker *-ki-*. If we isolate the conditional clause *Profesa Lipumba akieleza sababu nyingine za Ukawa*, we cannot know whether this is a temporal condition ('when') or a general condition ('if'). We cannot know either whether the condition refers to present tense, or past tense, or perhaps future tense. Therefore, we cannot find criteria for disambiguation within the conditional clause.

We see that the analyzer produces separate readings for present tense (COND-IN PR:na), past tense (COND-IF PAST), and future tense (COND-IF FUT:ta), although the verb does not contain any marker for tense distinctions. The message is that the conditional clause marked with *-ki-* can have any of these three tenses.

Let us look for the first type of ambiguity, that is, whether the clause is of 'when' type or 'if' type. It is extremely hard to find reliable criteria for disambiguation anywhere in the context. The statistical analysis shows, however, that the *-ki-* marker is often used in the

temporal sense ('when'). When the 'if' type conditional clause is constructed, it is often done using the word *ikiwa*, meaning 'if'. This is formally the verb (-*wa*) with the subject prefix of the class 9 (*i-*) and the conditional marker (-*ki-*). It is lexicalized to be a conjunction and it is frequently used to mean 'if'. Therefore, when the language user wants to construct a conditional clause with the unambiguous meaning 'if', one uses the word *ikiwa*. When one refers unambiguously to time ('when'), the user constructs a relative structure with the relative marker of class 16. If the conditional marker -*ki-* is used, it includes inevitably ambiguity. Yet this form is frequently used.

### 2.1.1 Resolving the ambiguity between 'when' and 'if' type condition

On the basis of the above considerations, the default meaning of the -*ki-* marker is temporal ('when') and if no rule applies, this interpretation is selected. When used in the 'if' sense, rules are applied.

### 2.1.2 Resolving the ambiguity between time references

As can be seen in (1), a separate reading is produced for present tense, past tense, and future tense interpretation. Which one should be selected in each case depends on the tense of the main verb of the main clause. In (1) the main verb of the main clause is *alitoa*, and it has the past tense marker PAST. On the basis of this marker a disambiguation rule can be written for resolving the ambiguity of the main verb of the conditional clause. The disambiguated sentence is in (2).

```
(2)
"<*profesa>"
  "*profesa" N TITLE { *professor } AN HUM INITCAP @SUBJ
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ
"<akieleza>"
  "eleza" V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PAST { when } z
[eleza] { explain } SVO PREFER @FMAINVtr+OBJ>
"<sababu>"
  "sababu" N 9/10-PL { the } { reason } @OBJ
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other } @<DN
"<za>"
  "za" GEN-CON 10-PL { of } @GCON
"<*ukawa>"
  "*ukawa" N PROPNAME SG { *ukawa } @<GN
"<,>"
  ", " COMMA { , }
"<alitoa>"
  "toa" V 1-SG3-SP VFIN { he } PAST z [toa] { give } SVO
@FMAINVtr+OBJ>
"<hotuba>"
  "hotuba" N 9/10-SG { the } { speech } @OBJ
"<yake>"
```

```
"ake" PRON POSS 9-SG SG3 { his } @GCON
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC @<P
"<.$>"
```

If we change the tense of the main verb of the main clause into present tense *anatoa* and disambiguate the sentence, we get a result as in (3).

```
(3)
"<*profesa>"
  "*profesa" N TITLE { *professor } AN HUM INITCAP @SUBJ
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ
"<akieleza>"
  "eleza" V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PR:na { when } z
[eleza] { explain } SVO PREFR @FMAINVtr+OBJ>
"<sababu>"
  "sababu" N 9/10-PL { the } { reason } @OBJ
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other } @<DN
"<za>"
  "za" GEN-CON 10-PL { of } @GCON
"<*ukawa>"
  "*ukawa" N PROPNAME SG { *ukawa } @<GN
"<,>"
  ", " COMMA { , }
"<anatoa>"
  "toa" V 1-SG3-SP VFIN { he } PR:na z [toa] { give } SVO
@FMAINVtr+OBJ>
"<hotuba>"
  "hotuba" N 9/10-SG { the } { speech } @OBJ
"<yake>"
  "ake" PRON POSS 9-SG SG3 { his } @GCON
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC @<P
"<.$>"
```

Finally, if we change the tense of the main verb of the main clause into future tense *atatoa*, we get the disambiguation result as in (4).

```
(4)
"<*profesa>"
  "*profesa" N TITLE { *professor } AN HUM INITCAP @SUBJ
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ
"<akieleza>"
  "eleza" V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF FUT:ta { when }
z [eleza] { explain } SVO PREFR @FMAINVtr+OBJ>
"<sababu>"
```

```

"sababu" N 9/10-PL { the } { reason } @OBJ
"<nyingine>"
"ingine" ADJ A-INFL :ENGINE 10-PL NOART { other } @<DN
"<za>"
"za" GEN-CON 10-PL { of } @GCON
"<*ukawa>"
"*ukawa" N PROPNAME SG { *ukawa } @<GN
"<,>"
", " COMMA { , }
"<atatoa>"
"toa" V 1-SG3-SP VFIN { he } FUT:ta z [toa] { give } SVO
@FMAINVtr+OBJ>
"<hotuba>"
"hotuba" N 9/10-SG { the } { speech } @OBJ
"<yake>"
"ake" PRON POSS 9-SG SG3 { his } @GCON
"<hadharani>"
"hadhara" N 9/10-SG { in } { the } { :open space } LOC @<P
"<.$>"

```

We have disambiguated all three sentences and can continue processing. Now we have to change the word order to meet the requirements of the target language that is English. First we see the word order of the source language (5).

(5)

```

( NUM { 1. } ) ( "<<s>>" { <s> } ) ( N TITLE { *professor } AN HUM
INITCAP @SUBJ ) ( <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ )
( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PAST { when } z { explain }
SVO PREFER ) ( N 9/10-PL { the } { reason } @OBJ ) ( ADJ A-INFL
:ENGINE 10-PL NOART { other } ) ( GEN-CON 10-PL { of } ) ( N
PROPNAME SG { *ukawa } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he }
PAST z { give } SVO ) ( N 9/10-SG { the } { speech } @OBJ ) ( PRON
POSS 9-SG SG3 { his } ) ( N 9/10-SG { in } { the } { :open space }
LOC ) ( ".$" { .$ } **CLB )
( NUM { 2. } ) ( "<<s>>" { <s> } ) ( N TITLE { *professor } AN HUM
INITCAP @SUBJ ) ( <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ )
( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PR:na { when } z { explain }
SVO PREFER ) ( N 9/10-PL { the } { reason } @OBJ ) ( ADJ A-INFL
:ENGINE 10-PL NOART { other } ) ( GEN-CON 10-PL { of } ) ( N
PROPNAME SG { *ukawa } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he }
PR:na z { give } SVO ) ( N 9/10-SG { the } { speech } @OBJ ) (
PRON POSS 9-SG SG3 { his } ) ( N 9/10-SG { in } { the } { :open
space } LOC ) ( ".$" { .$ } **CLB )
( NUM { 3. } ) ( "<<s>>" { <s> } ) ( N TITLE { *professor } AN HUM
INITCAP @SUBJ ) ( <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ )
( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF FUT:ta { when } z { explain }
SVO PREFER ) ( N 9/10-PL { the } { reason } @OBJ ) ( ADJ A-INFL
:ENGINE 10-PL NOART { other } ) ( GEN-CON 10-PL { of } ) ( N
PROPNAME SG { *ukawa } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he }
FUT:ta z { give } SVO ) ( N 9/10-SG { the } { speech } @OBJ ) (

```

PRON POSS 9-SG SG3 { his } ) ( N 9/10-SG { in } { the } { :open space } LOC ) ( ".\$" { .\$ } \*\*CLB )

The word order of the target language is in (6).

(6)  
 ( NUM { 1. } ) ( "<<s>>" { <s> } ) :( { when } ) :( N TITLE { \*professor } AN HUM INITCAP @SUBJ ) ( <Heur> PROPNAME { \*lipumba } MALE } CAP @SUBJ ) :( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PAST COND-IF PAST z { explain } SVO PREFER ) ( : ADJ A-INFL :ENGINE 10-PL NOART { other } ) :( N 9/10-PL { reason } @OBJ ) ( GEN-CON 10-PL { of } ) ( N PROPNAME SG { \*ukawa } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he } PAST z { give } SVO ) :( PRON POSS 9-SG SG3 { his } ) :( N 9/10-SG { speech } @OBJ ) ( N 9/10-SG { in } { the } { :open space } LOC ) ( ".\$" { .\$ } \*\*CLB )  
 ( NUM { 2. } ) ( "<<s>>" { <s> } ) :( { when } ) :( N TITLE { \*professor } AN HUM INITCAP @SUBJ ) ( <Heur> PROPNAME { \*lipumba } MALE } CAP @SUBJ ) :( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PR:na COND-IF PR:na z { explain } SVO PREFER ) ( : ADJ A-INFL :ENGINE 10-PL NOART { other } ) :( N 9/10-PL { reason } @OBJ ) ( GEN-CON 10-PL { of } ) ( N PROPNAME SG { \*ukawa } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he } PR:na z { give } SVO ) :( PRON POSS 9-SG SG3 { his } ) :( N 9/10-SG { speech } @OBJ ) ( N 9/10-SG { in } { the } { :open space } LOC ) ( ".\$" { .\$ } \*\*CLB )  
 ( NUM { 3. } ) ( "<<s>>" { <s> } ) :( { when } ) :( N TITLE { \*professor } AN HUM INITCAP @SUBJ ) ( <Heur> PROPNAME { \*lipumba } MALE } CAP @SUBJ ) :( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF FUT:ta COND-IF FUT:ta z { explain } SVO PREFER ) ( : ADJ A-INFL :ENGINE 10-PL NOART { other } ) :( N 9/10-PL { reason } @OBJ ) ( GEN-CON 10-PL { of } ) ( N PROPNAME SG { \*ukawa } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he } FUT:ta z { give } SVO ) :( PRON POSS 9-SG SG3 { his } ) :( N 9/10-SG { speech } @OBJ ) ( N 9/10-SG { in } { the } { :open space } LOC ) ( ".\$" { .\$ } \*\*CLB )

Then we convert the glosses into surface forms of the target language, that is English (7).

(7)  
 ( NUM { 1. } )  
 ( "<<s>>" { <s> } )  
 :( { \*when } )  
 :( N TITLE { \*professor } AN HUM INITCAP @SUBJ )  
 ( <Heur> PROPNAME { \*lipumba } MALE } CAP @SUBJ )  
 :( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PAST COND-IF PAST :z { :explained } SVO PREFER )  
 ( : ADJ A-INFL :ENGINE 10-PL NOART { other } )  
 :( N 9/10-PL { reasons } @OBJ )  
 ( GEN-CON 10-PL { of } )  
 ( N PROPNAME SG { \*ukawa } )  
 ( COMMA { , } )  
 ( V 1-SG3-SP VFIN { he } PAST :z { :gave } SVO )

```

:( PRON POSS 9-SG SG3 { his } )
:( N 9/10-SG { speech } @OBJ )
( N 9/10-SG { in } { the } { :open space } LOC )
( ".$" { .$ } **CLB )
( NUM { 2. } )
( "<<s>>" { <s> } )
:( { *when } )
:( N TITLE { *professor } AN HUM INITCAP @SUBJ )
( <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ )
:( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF PR:na COND-IF PR:na :z {
:explains } SVO PREFER )
( : ADJ A-INFL :INGINE 10-PL NOART { other } )
:( N 9/10-PL { reasons } @OBJ )
( GEN-CON 10-PL { of } )
( N PROPNAME SG { *ukawa } )
( COMMA { , } )
( V 1-SG3-SP VFIN { he } PR:na :z { :gives } SVO )
:( PRON POSS 9-SG SG3 { his } )
:( N 9/10-SG { speech } @OBJ )
( N 9/10-SG { in } { the } { :open space } LOC )
( ".$" { .$ } **CLB )
( NUM { 3. } )
( "<<s>>" { <s> } )
:( { *when } )
:( N TITLE { *professor } AN HUM INITCAP @SUBJ )
( <Heur> PROPNAME { *lipumba } MALE } CAP @SUBJ )
:( V 1-SG3-SP VFIN NO-SP-GLOSS COND-IF FUT:ta COND-IF FUT:ta :z {
:will } { explain } SVO PREFER )
( : ADJ A-INFL :INGINE 10-PL NOART { other } )
:( N 9/10-PL { reasons } @OBJ )
( GEN-CON 10-PL { of } )
( N PROPNAME SG { *ukawa } )
( COMMA { , } )
( V 1-SG3-SP VFIN { he } FUT:ta :z { :will } { give } SVO )
:( PRON POSS 9-SG SG3 { his } )
:( N 9/10-SG { speech } @OBJ )
( N 9/10-SG { in } { the } { :open space } LOC )
( ".$" { .$ } **CLB )

```

Finally, when processing further we get the translation (8).

(8)

1. *When Professor Lipumba explained other reasons of Ukawa, he gave his speech in the open space.*
2. *When Professor Lipumba explains other reasons of Ukawa, he gives his speech in the open space.*
3. *When Professor Lipumba will explain other reasons of Ukawa, he will give his speech in the open space.*

### 2.1.3 Conditional clause follows the main clause



The order of the conditional clause and main clause can be changed so that the conditional clause comes after the main clause. Consider the examples in (8).

(8)

```
"<1.>"
  "1." NUM { 1. }
"<<s>>"
  "<s>" { <s> }
  "<s>" { <s> }
"<*lukuvi>"
  "*lukuvi" N PROPNAME SG PLACE { *lukuvi }
"<aliyasema>"
  "sema" V 1-SG3-SP VFIN { he } PAST 6-PL-OBJ OBJ { them } z
[sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { he } PAST 6-PL-OBJ OBJ { them } z
[sema] { scold , speak against , backbite } SVO
  "sema" V 1-SG3-SP VFIN { he } PAST 6-PLSG-OBJ OBJ { it } z
[sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { he } PAST 6-PLSG-OBJ OBJ { it } z
[sema] { scold , speak against , backbite } SVO
  "sema" V 1-SG3-SP VFIN { she } PAST 6-PL-OBJ OBJ { them } z
[sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { she } PAST 6-PL-OBJ OBJ { them } z
[sema] { scold , speak against , backbite } SVO
  "sema" V 1-SG3-SP VFIN { she } PAST 6-PLSG-OBJ OBJ { it } z
[sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { she } PAST 6-PLSG-OBJ OBJ { it } z
[sema] { scold , speak against , backbite } SVO
"<hayo>"
  "hayo" PRON DEM :hV ASS-OBJ 6-PL { these }
  "hayo" PRON DEM :hV ASS-OBJ 6-PLSG { this }
"<kanisani>"
  "kanisa" N 5/6-SG { in } { the } { church , :christian
community } LOC
  "kanisa" N 5/6-SG { on } { the } { church , :christian
community } LOC
"<akimwakilisha>"
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } 1-
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF PAST { when } 1-
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when }
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF { if } 1-SG3-OBJ
OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND:ki 1-SG3-OBJ OBJ {
him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { she } COND-IF PR:na { when }
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
```

"wakilisha" V 1-SG3-SP VFIN { she } COND-IF PAST { when } 1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND-IF FUT:ta { when } 1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND-IF { if } 1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND:ki 1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"<\*waziri>"  
"waziri" N 9/6-SG HUM { the } { \*minister } MALE HUM CAP  
"\*waziri" N TITLE { \*minister } AN HUM CAP  
"<\*mkuu>"  
"mkuu" N 1/2-SG HUM { the } { head , important person , person in :charge } CAP  
"kuu" ADJ A-INFL 1-SG { great , important , eminent } CAP  
"kuu" ADJ A-INFL 3-SG { great , important , eminent } CAP  
"kuu" ADJ A-INFL 11-SG { great , important , eminent } CAP  
"kuu" ADJ A-INFL 18-SG LOC { great , important , eminent } CAP  
CAP  
"<\*pinda>"  
"pinda" IMP VFIN z [pinda] { bend } SV  
"pinda" <kwisha z [pinda] { bend } SV  
"pinda" V IMP VFIN z [pinda] { bend } SV CAP  
"pinda" V <kwisha z [pinda] { bend } SV CAP  
"<.\$>"  
".\$" { .\$ } \*\*CLB  
"<2.>"  
"2." NUM { 2. }  
"<<s>>"  
"<s>" { <s> }  
"<s>" { <s> }  
"<\*lukuvi>"  
"\*lukuvi" N PROPNAME SG PLACE { \*lukuvi }  
"<anayasema>"  
"sema" V 1-SG3-SP VFIN { he } PR:na 6-PL-OBJ OBJ { them } z [sema] { say , speak , advise } SVO  
"sema" V 1-SG3-SP VFIN { he } PR:na 6-PL-OBJ OBJ { them } z [sema] { scold , speak against , backbite } SVO  
"sema" V 1-SG3-SP VFIN { he } PR:na 6-PLSG-OBJ OBJ { it } z [sema] { say , speak , advise } SVO  
"sema" V 1-SG3-SP VFIN { he } PR:na 6-PLSG-OBJ OBJ { it } z [sema] { scold , speak against , backbite } SVO  
"sema" V 1-SG3-SP VFIN { she } PR:na 6-PL-OBJ OBJ { them } z [sema] { say , speak , advise } SVO  
"sema" V 1-SG3-SP VFIN { she } PR:na 6-PL-OBJ OBJ { them } z [sema] { scold , speak against , backbite } SVO  
"sema" V 1-SG3-SP VFIN { she } PR:na 6-PLSG-OBJ OBJ { it } z [sema] { say , speak , advise } SVO  
"sema" V 1-SG3-SP VFIN { she } PR:na 6-PLSG-OBJ OBJ { it } z [sema] { scold , speak against , backbite } SVO  
"<hayo>"

"hayo" PRON DEM :hV ASS-OBJ 6-PL { these }  
"hayo" PRON DEM :hV ASS-OBJ 6-PLSG { this }  
"<kanisani>"  
"kanisa" N 5/6-SG { in } { the } { church , :christian  
community } LOC  
"kanisa" N 5/6-SG { on } { the } { church , :christian  
community } LOC  
"<akimwakilisha>"  
"wakilisha" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } 1-  
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { he } COND-IF PAST { when } 1-  
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when }  
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { he } COND-IF { if } 1-SG3-OBJ  
OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { he } COND:ki 1-SG3-OBJ OBJ {  
him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND-IF PR:na { when }  
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND-IF PAST { when } 1-  
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND-IF FUT:ta { when }  
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND-IF { if } 1-SG3-OBJ  
OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh  
"wakilisha" V 1-SG3-SP VFIN { she } COND:ki 1-SG3-OBJ OBJ {  
him , her } z [wakilika] { represent } SVO CAUS:sh  
"<\*waziri>"  
"waziri" N 9/6-SG HUM { the } { \*minister } MALE HUM CAP  
"\*waziri" N TITLE { \*minister } AN HUM CAP  
"<\*mkuu>"  
"mkuu" N 1/2-SG HUM { the } { head , important person ,  
person in :charge } CAP  
"kuu" ADJ A-INFL 1-SG { great , important , eminent } CAP  
"kuu" ADJ A-INFL 3-SG { great , important , eminent } CAP  
"kuu" ADJ A-INFL 11-SG { great , important , eminent } CAP  
"kuu" ADJ A-INFL 18-SG LOC { great , important , eminent }  
CAP  
"<\*pinda>"  
"pinda" IMP VFIN z [pinda] { bend } SV  
"pinda" <kwisha z [pinda] { bend } SV  
"pinda" V IMP VFIN z [pinda] { bend } SV CAP  
"pinda" V <kwisha z [pinda] { bend } SV CAP  
"<.\$>"  
".\$" { .\$ } \*\*CLB  
"<3.>"  
"3." NUM { 3. }  
"<<s>>"  
"<s>" { <s> }  
"<s>" { <s> }

```
"<*lukuvi>"
  "*lukuvi" N PROPNAME SG PLACE { *lukuvi }
"<atayasema>"
  "sema" V 1-SG3-SP VFIN { he } FUT:ta 6-PL-OBJ OBJ { them } z
[sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { he } FUT:ta 6-PL-OBJ OBJ { them } z
[sema] { scold , speak against , backbite } SVO
  "sema" V 1-SG3-SP VFIN { he } FUT:ta 6-PLSG-OBJ OBJ { it } z
[sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { he } FUT:ta 6-PLSG-OBJ OBJ { it } z
[sema] { scold , speak against , backbite } SVO
  "sema" V 1-SG3-SP VFIN { she } FUT:ta 6-PL-OBJ OBJ { them }
z [sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { she } FUT:ta 6-PL-OBJ OBJ { them }
z [sema] { scold , speak against , backbite } SVO
  "sema" V 1-SG3-SP VFIN { she } FUT:ta 6-PLSG-OBJ OBJ { it }
z [sema] { say , speak , advise } SVO
  "sema" V 1-SG3-SP VFIN { she } FUT:ta 6-PLSG-OBJ OBJ { it }
z [sema] { scold , speak against , backbite } SVO
"<hayo>"
  "hayo" PRON DEM :hV ASS-OBJ 6-PL { these }
  "hayo" PRON DEM :hV ASS-OBJ 6-PLSG { this }
"<kanisani>"
  "kanisa" N 5/6-SG { in } { the } { church , :christian
community } LOC
  "kanisa" N 5/6-SG { on } { the } { church , :christian
community } LOC
"<akimwakilisha>"
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } 1-
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF PAST { when } 1-
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when }
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF { if } 1-SG3-OBJ
OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { he } COND:ki 1-SG3-OBJ OBJ {
him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { she } COND-IF PR:na { when }
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { she } COND-IF PAST { when } 1-
SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { she } COND-IF FUT:ta { when }
1-SG3-OBJ OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { she } COND-IF { if } 1-SG3-OBJ
OBJ { him , her } z [wakilika] { represent } SVO CAUS:sh
  "wakilisha" V 1-SG3-SP VFIN { she } COND:ki 1-SG3-OBJ OBJ {
him , her } z [wakilika] { represent } SVO CAUS:sh
"<*waziri>"
  "waziri" N 9/6-SG HUM { the } { *minister } MALE HUM CAP
  "*waziri" N TITLE { *minister } AN HUM CAP
```

```
"<*mkuu>"
  "mkuu" N 1/2-SG HUM { the } { head , important person ,
person in :charge } CAP
  "kuu" ADJ A-INFL 1-SG { great , important , eminent } CAP
  "kuu" ADJ A-INFL 3-SG { great , important , eminent } CAP
  "kuu" ADJ A-INFL 11-SG { great , important , eminent } CAP
  "kuu" ADJ A-INFL 18-SG LOC { great , important , eminent }
CAP
"<*pinda>"
  "pinda" IMP VFIN z [pinda] { bend } SV
  "pinda" <kwisha z [pinda] { bend } SV
  "pinda" V IMP VFIN z [pinda] { bend } SV CAP
  "pinda" V <kwisha z [pinda] { bend } SV CAP
"<.$>"
  ".$" { .$ } **CLB
```

In writing disambiguation rules, we have to look for the tense on the left, from the main clause. After applying the disambiguation rules we get the result as in (9).

```
(9)
"<1.>"
  "1." NUM { 1. }
"<<s>>"
  "<s>" { <s> }
"<*lukuvi>"
  "*lukuvi" N PROPNAME SG PLACE { *lukuvi } @SUBJ
"<aliyasema>"
  "sema" V 1-SG3-SP VFIN NO-SP-GLOSS PAST 6-PL-OBJ OBJ NO-OBJ-
GLOSS z [sema] { say } SVO @FMAINVtr+OBJ>
"<hayo>"
  "hayo" PRON DEM :hV ASS-OBJ 6-PL { these }
"<kanisani>"
  "kanisa" N 5/6-SG { in } { the } { church } LOC @OBJ
"<akimwakilisha>"
  "wakilisha" V 1-SG3-SP VFIN { he } COND-IF PAST { when } 1-
SG3-OBJ OBJ NO-OBJ-GLOSS z [wakilika] { represent } SVO CAUS:sh )
@FMAINVtr+OBJ>
"<*waziri_*mkuu>"
  "*waziri_mkuu" N TITLE N { *prime *minister } @OBJ
"<*pinda>"
  "pinda" V <kwisha z [pinda] { *bend } SV CAP PROP-CAND
"<.$>"
  ".$" { .$ } **CLB
"<2.>"
  "2." NUM { 2. }
"<<s>>"
  "<s>" { <s> }
"<*lukuvi>"
  "*lukuvi" N PROPNAME SG PLACE { *lukuvi } @SUBJ
"<anayasema>"
```

```

    "sema" V 1-SG3-SP VFIN NO-SP-GLOSS PR:na 6-PL-OBJ OBJ NO-
OBJ-GLOSS z [sema] { say } SVO @FMAINVtr+OBJ>
"<hayo>"
    "hayo" PRON DEM :hV ASS-OBJ 6-PL { these }
"<kanisani>"
    "kanisa" N 5/6-SG { in } { the } { church } LOC @OBJ
"<akimwakilisha>"
    "wakilisha" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } 1-
SG3-OBJ OBJ NO-OBJ-GLOSS z [wakilika] { represent } SVO CAUS:sh )
@FMAINVtr+OBJ>
"<*waziri_*mkuu>"
    "*waziri_mkuu" N TITLE N { *prime *minister } @OBJ
"<*pinda>"
    "pinda" V <kwisha z [pinda] { *bend } SV CAP PROP-CAND
"<.$>"
    ".$" { .$ } **CLB
"<3.>"
    "3." NUM { 3. }
"<<s>>"
    "<s>" { <s> }
"<*lukuvi>"
    "*lukuvi" N PROPNAME SG PLACE { *lukuvi } @SUBJ
"<atayasema>"
    "sema" V 1-SG3-SP VFIN NO-SP-GLOSS FUT:ta 6-PL-OBJ OBJ NO-
OBJ-GLOSS z [sema] { say } SVO @FMAINVtr+OBJ>
"<hayo>"
    "hayo" PRON DEM :hV ASS-OBJ 6-PL { these }
"<kanisani>"
    "kanisa" N 5/6-SG { in } { the } { church } LOC @OBJ
"<akimwakilisha>"
    "wakilisha" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when }
1-SG3-OBJ OBJ NO-OBJ-GLOSS z [wakilika] { represent } SVO CAUS:sh
) @FMAINVtr+OBJ>
"<*waziri_*mkuu>"
    "*waziri_mkuu" N TITLE N { *prime *minister } @OBJ
"<*pinda>"
    "pinda" V <kwisha z [pinda] { *bend } SV CAP PROP-CAND
"<.$>"
    ".$" { .$ } **CLB

```

The final translation is in (10).

(10)

1. *Lukuvi said these in the church when he represented Prime Minister Pinda.*
2. *Lukuvi says these in the church when he represents Prime Minister Pinda.*
3. *Lukuvi will say these in the church when he will represent Prime Minister Pinda.*

## 2.2 Conditional sentences with the relative marker of the class 16

There is also a less ambiguous method of constructing conditional clauses. We can reformulate the above three sentences so that instead of using the *-ki-* marker we use the relative marker of the class 16. Swahili, as also other Bantu languages, use references to location/time in relative verb constructions. This makes it handy to use such a construction also to mark a temporal condition. The newly constructed sentences are in (11).

(11)

4. Profesa Lipumba alipoeleza sababu nyingine za Ukawa, alitoa hotuba yake hadharani.
5. Profesa Lipumba anapoeleza sababu nyingine za Ukawa, anatoa hotuba yake hadharani.
6. Profesa Lipumba atakapoeleza sababu nyingine za Ukawa, atatoa hotuba yake hadharani.

We see in (11) that in these constructions the tense marker is also in the verb of the conditional clause, and no ambiguity is found in this respect. We see this in the analysis result (12).

(12)

```
"<4.>"
  "4." NUM { 4. }
"<<s>>"
  "<s>" { <s> }
  "<s>" { <s> }
"<*profesa>"
  "profesa" N 9/6-SG HUM { the } { professor } MALE HUM CAP
  "*profesa" N TITLE { *professor } AN HUM CAP
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
  "lipumba" <Heur> N 9/10-SG { lipumba } CAP
"<alipoeleza>"
  "eleza" V 1-SG3-SP VFIN { he } PAST 16-SG-REL { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { he } PAST 16-SG-REL { where } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } PAST 16-SG-REL { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } PAST 16-SG-REL { where } z
[eleza] { explain , describe , elucidate } SVO PREFER
"<sababu>"
  "sababu" N 9/10-SG { the } { reason , cause , motive }
  "sababu" N 9/10-PL { the } { reason , cause , motive }
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 9-SG NOART { another }
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other }
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { others }
```

```

    "ingine" PRON :INGINE 9-SG NOART { another }
    "ingine" PRON :INGINE 10-PL NOART { other }
    "ingine" PRON :INGINE 10-PL NOART { others }
"<za>"
    "za" GEN-CON 10-PL { of }
"<*ukawa>"
    "*ukawa" N PROPNAME SG { *ukawa }
    "wa" V 1-SG2-SP VFIN { you } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
    "wa" V 3-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA SV
MONOSLB CAP
    "wa" V 11-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
"<,>"
    "," COMMA { , }
"<alitoa>"
    "toa" V 1-SG3-SP VFIN { he } PAST z [toa] { give , publish ,
put out } SVO
    "toa" V 1-SG3-SP VFIN { she } PAST z [toa] { give , publish
, put out } SVO
    "toa" V 1-SG3-SP VFIN { he } PR:a 5-SG-OBJ OBJ { it } z
[toa] { give , publish , put out } SVO
    "toa" V 1-SG3-SP VFIN { she } PR:a 5-SG-OBJ OBJ { it } z
[toa] { give , publish , put out } SVO
"<hotuba>"
    "hotuba" N 5/6-SG { the } { speech }
    "hotuba" N 9/10-SG { the } { speech , address , discourse }
    "hotuba" N 9/10-PL { the } { speech , address , discourse }
"<yake>"
    "ake" PRON POSS 4-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PLSG SG3 { his , her , its }
    "ake" PRON POSS 9-SG SG3 { his , her , its }
    "ake" PRON POSS 4-PL SG3 <PRE { him , her , it }
    "ake" PRON POSS 9-SG SG3 <PRE { him , her , it }
    "ake" PRON POSS 6-PL SG3 <PRE { him , her , it }
    "ake" PRON POSS 6-PLSG SG3 <PRE { him , her , it }
"<hadharani>"
    "hadhara" N 9/10-SG { in } { the } { :open space } LOC
    "hadhara" N 9/10-SG { on } { the } { :open space } LOC
    "hadhara" N 9/10-PL { in } { the } { :open space } LOC
    "hadhara" N 9/10-PL { on } { the } { :open space } LOC
"<.$>"
    ".$" { .$ } **CLB
"<5.>"
    "5." NUM { 5. }
"<<s>>"
    "<s>" { <s> }
    "<s>" { <s> }
"<*profesa>"
    "profesa" N 9/6-SG HUM { the } { professor } MALE HUM CAP

```



```

    "*profesa" N TITLE { *professor } AN HUM CAP
"<*lipumba>"
    "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
    "lipumba" <Heur> N 9/10-SG { lipumba } CAP
"<anapoeleza>"
    "eleza" V 1-SG3-SP VFIN { he } PR:na 16-SG-REL { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
    "eleza" V 1-SG3-SP VFIN { he } PR:na 16-SG-REL { where } z
[eleza] { explain , describe , elucidate } SVO PREFER
    "eleza" V 1-SG3-SP VFIN { she } PR:na 16-SG-REL { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
    "eleza" V 1-SG3-SP VFIN { she } PR:na 16-SG-REL { where } z
[eleza] { explain , describe , elucidate } SVO PREFER
"<sababu>"
    "sababu" N 9/10-SG { the } { reason , cause , motive }
    "sababu" N 9/10-PL { the } { reason , cause , motive }
"<nyingine>"
    "ingine" ADJ A-INFL :ENGINE 9-SG NOART { another }
    "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other }
    "ingine" ADJ A-INFL :ENGINE 10-PL NOART { others }
    "ingine" PRON :ENGINE 9-SG NOART { another }
    "ingine" PRON :ENGINE 10-PL NOART { other }
    "ingine" PRON :ENGINE 10-PL NOART { others }
"<za>"
    "za" GEN-CON 10-PL { of }
"<*ukawa>"
    "*ukawa" N PROPNAME SG { *ukawa }
    "wa" V 1-SG2-SP VFIN { you } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
    "wa" V 3-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA SV
MONOSLB CAP
    "wa" V 11-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
"<,>"
    "," COMMA { , }
"<anatoa>"
    "toa" V 1-SG3-SP VFIN { he } PR:na z [toa] { give , publish
, put out } SVO
    "toa" V 1-SG3-SP VFIN { she } PR:na z [toa] { give , publish
, put out } SVO
"<hotuba>"
    "hotuba" N 5/6-SG { the } { speech }
    "hotuba" N 9/10-SG { the } { speech , address , discourse }
    "hotuba" N 9/10-PL { the } { speech , address , discourse }
"<yake>"
    "ake" PRON POSS 4-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PLSG SG3 { his , her , its }
    "ake" PRON POSS 9-SG SG3 { his , her , its }
    "ake" PRON POSS 4-PL SG3 <PRE { him , her , it }
    "ake" PRON POSS 9-SG SG3 <PRE { him , her , it }

```

```

"ake" PRON POSS 6-PL SG3 <PRE { him , her , it }
"ake" PRON POSS 6-PLSG SG3 <PRE { him , her , it }
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC
  "hadhara" N 9/10-SG { on } { the } { :open space } LOC
  "hadhara" N 9/10-PL { in } { the } { :open space } LOC
  "hadhara" N 9/10-PL { on } { the } { :open space } LOC
"<.$>"
  ".$" { .$ } **CLB
"<6.>"
  "6." NUM { 6. }
"<<s>>"
  "<s>" { <s> }
  "<s>" { <s> }
"<*profesa>"
  "profesa" N 9/6-SG HUM { the } { professor } MALE HUM CAP
  "*profesa" N TITLE { *professor } AN HUM CAP
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
  "lipumba" <Heur> N 9/10-SG { lipumba } CAP
"<atakapoeleza>"
  "eleza" V 1-SG3-SP VFIN { he } FUT:taka 16-SG-REL { when } z
[eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { he } FUT:taka 16-SG-REL { where }
z [eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } FUT:taka 16-SG-REL { when }
z [eleza] { explain , describe , elucidate } SVO PREFER
  "eleza" V 1-SG3-SP VFIN { she } FUT:taka 16-SG-REL { where }
z [eleza] { explain , describe , elucidate } SVO PREFER
"<sababu>"
  "sababu" N 9/10-SG { the } { reason , cause , motive }
  "sababu" N 9/10-PL { the } { reason , cause , motive }
"<nyingine>"
  "ingine" ADJ A-INFL :INGINE 9-SG NOART { another }
  "ingine" ADJ A-INFL :INGINE 10-PL NOART { other }
  "ingine" ADJ A-INFL :INGINE 10-PL NOART { others }
  "ingine" PRON :INGINE 9-SG NOART { another }
  "ingine" PRON :INGINE 10-PL NOART { other }
  "ingine" PRON :INGINE 10-PL NOART { others }
"<za>"
  "za" GEN-CON 10-PL { of }
"<*ukawa>"
  "*ukawa" N PROPNAME SG { *ukawa }
  "wa" V 1-SG2-SP VFIN { you } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
  "wa" V 3-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA SV
MONOSLB CAP
  "wa" V 11-SG-SP VFIN { it } NARR:ka z [wa] { be } V AUX-WA
SV MONOSLB CAP
"<,>"
  "," COMMA { , }

```

```
"<atatoa>"
  "toa" V 1-SG3-SP VFIN { he } FUT:ta z [toa] { give , publish
, put out } SVO
  "toa" V 1-SG3-SP VFIN { she } FUT:ta z [toa] { give ,
publish , put out } SVO
"<hotuba>"
  "hotuba" N 5/6-SG { the } { speech }
  "hotuba" N 9/10-SG { the } { speech , address , discourse }
  "hotuba" N 9/10-PL { the } { speech , address , discourse }
"<yake>"
  "ake" PRON POSS 4-PL SG3 { his , her , its }
  "ake" PRON POSS 6-PL SG3 { his , her , its }
  "ake" PRON POSS 6-PLSG SG3 { his , her , its }
  "ake" PRON POSS 9-SG SG3 { his , her , its }
  "ake" PRON POSS 4-PL SG3 <PRE { him , her , it }
  "ake" PRON POSS 9-SG SG3 <PRE { him , her , it }
  "ake" PRON POSS 6-PL SG3 <PRE { him , her , it }
  "ake" PRON POSS 6-PLSG SG3 <PRE { him , her , it }
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC
  "hadhara" N 9/10-SG { on } { the } { :open space } LOC
  "hadhara" N 9/10-PL { in } { the } { :open space } LOC
  "hadhara" N 9/10-PL { on } { the } { :open space } LOC
"<.$>"
  ".$" { .$ } **CLB
```

Although tense causes no problem in examples in (12), there is now ambiguity between time and location, because the locative marker *-po-* can refer to time or location. This ambiguity must be resolved using disambiguation rules. However, time can be selected as a default interpretation, because this is the more frequent interpretation, and the interpretation of location is resolved with rules. The disambiguated result is in (13).

```
(13)
"<4.>"
  "4." NUM { 4. }
"<<s>>"
  "<s>" { <s> }
"<*profesa>"
  "*profesa" N TITLE { *professor } AN HUM INITCAP @SUBJ
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
"<alipoeleza>"
  "eleza" V 1-SG3-SP VFIN NO-SP-GLOSS PAST 16-SG-REL { when }
z [eleza] { explain } SVO PREFR @FMAINVtr+OBJ>
"<sababu>"
  "sababu" N 9/10-PL { the } { reason } @OBJ
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other } @<DN
"<za>"
  "za" GEN-CON 10-PL { of } @GCON
```

```
"<*ukawa>"
  "*ukawa" N PROPNAME SG { *ukawa } @<GN
"<,>"
  "," COMMA { , }
"<alitoa>"
  "toa" V 1-SG3-SP VFIN { he } PAST z [toa] { give } SVO
@FMAINVtr+OBJ>
"<hotuba>"
  "hotuba" N 9/10-SG { the } { speech } @OBJ
"<yake>"
  "ake" PRON POSS 9-SG SG3 { his } @GCON
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC @<P
"<.$>"
  ".$" { .$ } **CLB
"<5.>"
  "5." NUM { 5. }
"<<s>>"
  "<s>" { <s> }
"<*profesa>"
  "*profesa" N TITLE { *professor } AN HUM INITCAP @SUBJ
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
"<anapoeleza>"
  "eleza" V 1-SG3-SP VFIN NO-SP-GLOSS PR:na 16-SG-REL { when }
z [eleza] { explain } SVO PREFER @FMAINVtr+OBJ>
"<sababu>"
  "sababu" N 9/10-PL { the } { reason } @OBJ
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other } @<DN
"<za>"
  "za" GEN-CON 10-PL { of } @GCON
"<*ukawa>"
  "*ukawa" N PROPNAME SG { *ukawa } @<GN
"<,>"
  "," COMMA { , }
"<anatoa>"
  "toa" V 1-SG3-SP VFIN { he } PR:na z [toa] { give } SVO
@FMAINVtr+OBJ>
"<hotuba>"
  "hotuba" N 9/10-SG { the } { speech } @OBJ
"<yake>"
  "ake" PRON POSS 9-SG SG3 { his } @GCON
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC @<P
"<.$>"
  ".$" { .$ } **CLB
"<6.>"
  "6." NUM { 6. }
"<<s>>"
  "<s>" { <s> }
```

```
"<*profesa>"
  "*profesa" N TITLE { *professor } AN HUM INITCAP @SUBJ
"<*lipumba>"
  "*lipumba" <Heur> PROPNAME { *lipumba } MALE } CAP
"<atakapoeleza>"
  "eleza" V 1-SG3-SP VFIN NO-SP-GLOSS FUT:taka 16-SG-REL {
when } z [eleza] { explain } SVO PREFER @FMAINVtr+OBJ>
"<sababu>"
  "sababu" N 9/10-PL { the } { reason } @OBJ
"<nyingine>"
  "ingine" ADJ A-INFL :ENGINE 10-PL NOART { other } @<DN
"<za>"
  "za" GEN-CON 10-PL { of } @GCON
"<*ukawa>"
  "*ukawa" N PROPNAME SG { *ukawa } @<GN
"<,>"
  "," COMMA { , }
"<atatoa>"
  "toa" V 1-SG3-SP VFIN { he } FUT:ta z [toa] { give } SVO
@FMAINVtr+OBJ>
"<hotuba>"
  "hotuba" N 9/10-SG { the } { speech } @OBJ
"<yake>"
  "ake" PRON POSS 9-SG SG3 { his } @GCON
"<hadharani>"
  "hadhara" N 9/10-SG { in } { the } { :open space } LOC @<P
"<.$>"
  ".$" { .$ } **CLB
```

The final translation of the above three sentences is in (14).

(14)

4. *When Professor Lipumba explained other reasons of Ukawa, he gave his speech in the open space.*
5. *When Professor Lipumba explains other reasons of Ukawa, he gives his speech in the open space.*
6. *When Professor Lipumba will explain other reasons of Ukawa, he will give his speech in the open space.*

Finally, all six example sentences with their translation is presented in (15).

(15)

1. Profesa Lipumba akieleza sababu nyingine za Ukawa, alitoa hotuba yake hadharani.
2. Profesa Lipumba akieleza sababu nyingine za Ukawa, anatoa hotuba yake hadharani.
3. Profesa Lipumba akieleza sababu nyingine za Ukawa, atatoa hotuba yake hadharani.
4. Profesa Lipumba alipoeleza sababu nyingine za Ukawa, alitoa hotuba yake hadharani.
5. Profesa Lipumba anapoeleza sababu nyingine za Ukawa, anatoa hotuba yake hadharani.

6. Profesa Lipumba atakapoeleza sababu nyingine za Ukawa, atatoa hotuba yake hadharani.

1. When Professor Lipumba explained other reasons of Ukawa, he gave his speech in the open space.

2. When Professor Lipumba explains other reasons of Ukawa, he gives his speech in the open space.

3. When Professor Lipumba will explain other reasons of Ukawa, he will give his speech in the open space.

4. When Professor Lipumba explained other reasons of Ukawa, he gave his speech in the open space.

5. When Professor Lipumba explains other reasons of Ukawa, he gives his speech in the open space.

6. When Professor Lipumba will explain other reasons of Ukawa, he will give his speech in the open space.

### 3 The *-ki-* marker in constructions meaning continuing action

The *-ki-* marker is frequently used also in expressions outside the conditional clause, such as *alikuwa akifanya* (he was doing), *atakuwa akifanya* (he is going to do). We discuss this use here briefly. Consider examples in (16).

(16)  
 "<1.>"  
 "1." NUM { 1. }  
 "<<s>>"  
 "<s>" { <s> }  
 "<s>" { <s> }  
 "<\*mtoto>"  
 "mtoto" N 1/2-SG HUM { the } { child , :young person , juvenile } CAP  
 "<huyo>"  
 "huyo" PRON DEM :hV ASS-OBJ 1-SG { this , that }  
 "<alikuwa>"  
 "wa" V 1-SG3-SP VFIN { he } PAST INFMARK z [wa] { be } AUX-WA SV MONOSLB  
 "wa" V 1-SG3-SP VFIN { she } PAST INFMARK z [wa] { be } AUX-WA SV MONOSLB  
 "<akiishi>"  
 "ishi" V SBJN 1-SG3-SP VFIN { he } 7-SG-OBJ OBJ { it } z [ishi] { live , exist , be alive } SV  
 "ishi" V INF-SBJN { to } 7-SG-OBJ OBJ { it } z [ishi] { live , exist , be alive } SV  
 "ishi" V SBJN 1-SG3-SP VFIN { she } 7-SG-OBJ OBJ { it } z [ishi] { live , exist , be alive } SV  
 "ishi" V INF-SBJN { to } 7-SG-OBJ OBJ { it } z [ishi] { live , exist , be alive } SV  
 "ishi" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } z [ishi] { live , exist , be alive } SV

```

    "ishi" V 1-SG3-SP VFIN { he } COND-IF PAST { when } z [ishi]
{ live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when } z
[ishi] { live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { he } COND-IF { if } z [ishi] { live
, exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { he } COND:ki z [ishi] { live ,
exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { she } COND-IF PR:na { when } z
[ishi] { live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { she } COND-IF PAST { when } z
[ishi] { live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { she } COND-IF FUT:ta { when } z
[ishi] { live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { she } COND-IF { if } z [ishi] {
live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { she } COND:ki z [ishi] { live ,
exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { he } PR:a 7-SG-OBJ OBJ { it } z
[ishi] { live , exist , be alive } SV
    "ishi" V 1-SG3-SP VFIN { she } PR:a 7-SG-OBJ OBJ { it } z
[ishi] { live , exist , be alive } SV
"<na>"
    "na" CC { and }
    "na" AG-PART { by }
    "na" PREP { with }
    "na" NA-POSS { of }
    "na" ADV NOART { past }
    "na" ADV { also }
"<baba>"
    "baba" N 9/10-SG { the } { father , sire } AN HUM
    "baba" N 9/10-PL { the } { father , sire } AN HUM
    "baba" N 9/6-SG HUM { the } { father } MALE HUM
"<yake>"
    "ake" PRON POSS 4-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PL SG3 { his , her , its }
    "ake" PRON POSS 6-PLSG SG3 { his , her , its }
    "ake" PRON POSS 9-SG SG3 { his , her , its }
    "ake" PRON POSS 4-PL SG3 <PRE { him , her , it }
    "ake" PRON POSS 9-SG SG3 <PRE { him , her , it }
    "ake" PRON POSS 6-PL SG3 <PRE { him , her , it }
    "ake" PRON POSS 6-PLSG SG3 <PRE { him , her , it }
"<.$>"
    ".$" { .$ } **CLB
"<2.>"
    "2." NUM { 2. }
"<<s>>"
    "<s>" { <s> }
    "<s>" { <s> }
"<*mtoto>"

```

"mtoto" N 1/2-SG HUM { the } { child , :young person , juvenile } CAP  
 "<huyo>"  
 "huyo" PRON DEM :hV ASS-OBJ 1-SG { this , that }  
 "<alikuwa>"  
 "wa" V 1-SG3-SP VFIN { he } PAST INFMARK z [wa] { be } AUX-WA SV MONOSLB  
 "wa" V 1-SG3-SP VFIN { she } PAST INFMARK z [wa] { be } AUX-WA SV MONOSLB  
 "<anaishi>"  
 "ishi" V 1-SG3-SP VFIN { he } PR:na z [ishi] { live , exist , be alive } SV  
 "ishi" V 1-SG3-SP VFIN { she } PR:na z [ishi] { live , exist , be alive } SV  
 "<na>"  
 "na" CC { and }  
 "na" AG-PART { by }  
 "na" PREP { with }  
 "na" NA-POSS { of }  
 "na" ADV NOART { past }  
 "na" ADV { also }  
 "<baba>"  
 "baba" N 9/10-SG { the } { father , sire } AN HUM  
 "baba" N 9/10-PL { the } { father , sire } AN HUM  
 "baba" N 9/6-SG HUM { the } { father } MALE HUM  
 "<yake>"  
 "ake" PRON POSS 4-PL SG3 { his , her , its }  
 "ake" PRON POSS 6-PL SG3 { his , her , its }  
 "ake" PRON POSS 6-PLSG SG3 { his , her , its }  
 "ake" PRON POSS 9-SG SG3 { his , her , its }  
 "ake" PRON POSS 4-PL SG3 <PRE { him , her , it }  
 "ake" PRON POSS 9-SG SG3 <PRE { him , her , it }  
 "ake" PRON POSS 6-PL SG3 <PRE { him , her , it }  
 "ake" PRON POSS 6-PLSG SG3 <PRE { him , her , it }  
 "<.\$>"  
 ".\$" { .\$ } \*\*CLB  
 "<3.>"  
 "3." NUM { 3. }  
 "<<s>>"  
 "<s>" { <s> }  
 "<s>" { <s> }  
 "<\*mtoto>"  
 "mtoto" N 1/2-SG HUM { the } { child , :young person , juvenile } CAP  
 "<huyo>"  
 "huyo" PRON DEM :hV ASS-OBJ 1-SG { this , that }  
 "<atakuwa>"  
 "wa" V 1-SG3-SP VFIN { he } FUT:ta INFMARK z [wa] { be } AUX-WA SV MONOSLB  
 "wa" V 1-SG3-SP VFIN { she } FUT:ta INFMARK z [wa] { be } AUX-WA SV MONOSLB



"<akiishi>"  
"ishi" V SBJN 1-SG3-SP VFIN { he } 7-SG-OBJ OBJ { it } z  
[ishi] { live , exist , be alive } SV  
"ishi" V INF-SBJN { to } 7-SG-OBJ OBJ { it } z [ishi] { live  
, exist , be alive } SV  
"ishi" V SBJN 1-SG3-SP VFIN { she } 7-SG-OBJ OBJ { it } z  
[ishi] { live , exist , be alive } SV  
"ishi" V INF-SBJN { to } 7-SG-OBJ OBJ { it } z [ishi] { live  
, exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { he } COND-IF PR:na { when } z  
[ishi] { live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { he } COND-IF PAST { when } z [ishi]  
{ live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { he } COND-IF FUT:ta { when } z  
[ishi] { live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { he } COND-IF { if } z [ishi] { live  
, exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { he } COND:ki z [ishi] { live ,  
exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { she } COND-IF PR:na { when } z  
[ishi] { live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { she } COND-IF PAST { when } z  
[ishi] { live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { she } COND-IF FUT:ta { when } z  
[ishi] { live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { she } COND-IF { if } z [ishi] {  
live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { she } COND:ki z [ishi] { live ,  
exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { he } PR:a 7-SG-OBJ OBJ { it } z  
[ishi] { live , exist , be alive } SV  
"ishi" V 1-SG3-SP VFIN { she } PR:a 7-SG-OBJ OBJ { it } z  
[ishi] { live , exist , be alive } SV  
"<na>"  
"na" CC { and }  
"na" AG-PART { by }  
"na" PREP { with }  
"na" NA-POSS { of }  
"na" ADV NOART { past }  
"na" ADV { also }  
"<baba>"  
"baba" N 9/10-SG { the } { father , sire } AN HUM  
"baba" N 9/10-PL { the } { father , sire } AN HUM  
"baba" N 9/6-SG HUM { the } { father } MALE HUM  
"<yake>"  
"ake" PRON POSS 4-PL SG3 { his , her , its }  
"ake" PRON POSS 6-PL SG3 { his , her , its }  
"ake" PRON POSS 6-PLSG SG3 { his , her , its }  
"ake" PRON POSS 9-SG SG3 { his , her , its }  
"ake" PRON POSS 4-PL SG3 <PRE { him , her , it }  
"ake" PRON POSS 9-SG SG3 <PRE { him , her , it }

```
"ake" PRON POSS 6-PL SG3 <PRE { him , her , it }
"ake" PRON POSS 6-PLSG SG3 <PRE { him , her , it }
"<.$>"
" .$" { .$ } **CLB
```

The auxiliary verb *wa* and the main verb with the *-ki-* marker form a verbal unit, a multiword expression, and this unit must be handled as a single grammatical element.

In (16) we have the verbal combinations *alikuwa akiishi*, *alikuwa anaishi*, and *atakuwa akiishi*. In two of them the main verb has the *-ki-* marker. We also see that the verbs with *-ki-* marker have a lot of ambiguity. This reflects the fact that the *-ki-* marker stands for a number of meanings. It is also possible to construct the expression of continuing action with the present tense marker, as we see above. If this construction is used, ambiguity is reduced to the he/she distinction. The disambiguated sentences are in (17).

```
(17)
"<1.>"
"1." NUM { 1. }
"<<s>>"
"<s>" { <s> }
"<*mtoto>"
"mtoto" N 1/2-SG HUM { the } { child } INITCAP @SUBJ
"<huyo>"
"huyo" PRON DEM :hV ASS-OBJ 1-SG { this } @<NDEM
"<alikuwa>"
"wa" V 1-SG3-SP VFIN NO-SP-GLOSS PAST INFMARK z [wa] { be }
AUX-WA SV MONOSLB @FAUXV
"<akiishi>"
"ishi" V 1-SG3-SP VFIN NO-SP-GLOSS COND:ki z [ishi] { live }
SV @-FMAINV-n
"<na>"
"na" PREP { with } @ADVL
"<baba>"
"baba" N 9/10-SG { the } { father } AN HUM @<P
"<yake>"
"ake" PRON POSS 9-SG SG3 { his } @GCON
"<.$>"
" .$" { .$ } **CLB
"<2.>"
"2." NUM { 2. }
"<<s>>"
"<s>" { <s> }
"<*mtoto>"
"mtoto" N 1/2-SG HUM { the } { child } INITCAP @SUBJ
"<huyo>"
"huyo" PRON DEM :hV ASS-OBJ 1-SG { this } @<NDEM
"<alikuwa>"
"wa" V 1-SG3-SP VFIN NO-SP-GLOSS PAST INFMARK z [wa] { be }
AUX-WA SV MONOSLB @FAUXV
```

```
"<anaishi>"
  "ishi" V 1-SG3-SP VFIN { he } PR:na z [ishi] { live } SV @-
FMAINV-n
"<na>"
  "na" PREP { with } @ADVL
"<baba>"
  "baba" N 9/10-SG { the } { father } AN HUM @<P
"<yake>"
  "ake" PRON POSS 9-SG SG3 { his } @GCON
"<.$>"
  ".$" { .$ } **CLB
"<3.>"
  "3." NUM { 3. }
"<<s>>"
  "<s>" { <s> }
"<*mtoto>"
  "mtoto" N 1/2-SG HUM { the } { child } INITCAP @SUBJ
"<huyo>"
  "huyo" PRON DEM :hV ASS-OBJ 1-SG { this } @<NDEM
"<atakuwa>"
  "wa" V 1-SG3-SP VFIN NO-SP-GLOSS FUT:ta INFMARK z [wa] { be
} AUX-WA SV MONOSLB @FAUXV
"<akiishi>"
  "ishi" V 1-SG3-SP VFIN { he } COND:ki z [ishi] { live } SV
@-FMAINV-n
"<na>"
  "na" PREP { with } @ADVL
"<baba>"
  "baba" N 9/10-SG { the } { father } AN HUM @<P
"<yake>"
  "ake" PRON POSS 9-SG SG3 { his } @GCON
"<.$>"
  ".$" { .$ } **CLB
```

Next we produce the surface forms of the target language (18).

```
(18)
( NUM { 1. } )
( "<<s>>" { <s> } )
:( PRON DEM :hV ASS-OBJ 1-SG { *this } )
:( N 1/2-SG HUM { child } INITCAP @SUBJ )
( V 1-SG3-SP VFIN NO-SP-GLOSS PAST INFMARK :z { :was } AUX-WA SV
@FAUXV V 1-SG3-SP VFIN NO-SP-GLOSS COND:ki :z { :living } SV )
( PREP { with } @ADVL )
:( PRON POSS 9-SG SG3 { his } )
:( N 9/10-SG { father } AN HUM )
( ".$" { .$ } **CLB )
( NUM { 2. } )
( "<<s>>" { <s> } )
:( PRON DEM :hV ASS-OBJ 1-SG { *this } )
:( N 1/2-SG HUM { child } INITCAP @SUBJ )
```

```
( V 1-SG3-SP VFIN NO-SP-GLOSS PAST INFMARK :z { :was } AUX-WA SV
@FAUXV V 1-SG3-SP VFIN PR:na :z { :living } SV )
( PREP { with } @ADVL )
:( PRON POSS 9-SG SG3 { his } )
:( N 9/10-SG { father } AN HUM )
( ".$" { .$ } **CLB )
( NUM { 3. } )
( "<<s>>" { <s> } )
:( PRON DEM :hV ASS-OBJ 1-SG { *this } )
:( N 1/2-SG HUM { child } INITCAP @SUBJ )
( V 1-SG3-SP VFIN NO-SP-GLOSS FUT:ta INFMARK :z { :will } { :be }
AUX-WA SV @FAUXV V 1-SG3-SP VFIN COND:ki :z { :living } SV )
( PREP { with } @ADVL )
:( PRON POSS 9-SG SG3 { his } )
:( N 9/10-SG { father } AN HUM )
( ".$" { .$ } **CLB )
```

We see that the auxiliary verb and the main verb are bracketed as a single unit. The final translation is in (19).

(19)

1. *This child was living with his father.*
2. *This child was living with his father.*
3. *This child will be living with his father.*

#### 4 Conditional clauses using -nge- and -ngali- markers

Swahili has aspect markers *-nge-* (would) and *-ngali-* (would have). These can be used in constructing conditional expressions. If either of these markers is used in the conditional clause, the same marker must be used also in the verb of the main clause. We discuss the use of these markers using examples as in (17).

(17)

1. Ningekuwa na uwezo, ningeamua mchakato huu wa Katiba.
2. Angekuwa na uwezo, angeamua mchakato huu wa Katiba.
3. Katibu angekuwa na uwezo, angeamua mchakato huu wa Katiba.
4. Ningalikuwa na uwezo, ningaliamua mchakato huu wa Katiba.
5. Angalikuwa na uwezo, angaliamua mchakato huu wa Katiba.
6. Katibu angalikuwa na uwezo, angaliamua mchakato huu wa Katiba.

##### 4.1 Conditional clauses using the -nge- marker

The first three sentences are analysed in (18)

(18)

```
"<1.>"
      "1." NUM { 1. }
"<<s>>"
```

```

    "<s>" { <s> }
    "<s>" { <s> }
"<*ningekuwa>"
    "wa" V 1-SG1-SP VFIN { *i } COND:nge INFMARK z [wa] { be }
AUX-WA SV MONOSLB CAP
    "wa" V 1-SG1-SP VFIN { *i } COND:nge { if } INFMARK z [wa] {
be } AUX-WA SV MONOSLB CAP
"<na>"
    "na" CC { and }
    "na" AG-PART { by }
    "na" PREP { with }
    "na" NA-POSS { of }
    "na" ADV NOART { past }
    "na" ADV { also }
"<uwezo>"
    "wa" V 1-SG2-SP VFIN { you } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 3-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV MONOSLB
**SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 11-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "uwezo" N 11-SG { ability , capability , capacity }
"<,>"
    "," COMMA { , }
"<ningeamua>"
    "amua" V 1-SG1-SP VFIN { *i } COND:nge z [amua] { decide ,
judge , resolve } SVO
    "amua" V 1-SG1-SP VFIN { *i } COND:nge { if } z [amua] {
decide , judge , resolve } SVO
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process }
"<huu>"
    "huu" PRON DEM :hV 3-SG { this }
    "huu" PRON DEM :hV 11-SG { this }
"<wa>"
    "wa" GEN-CON 3-SG { of }
    "wa" GEN-CON 11-SG { of }
    "wa" GEN-CON 1-SG { of }
    "wa" GEN-CON 2-PL { of }
"<*katiba>"
    "katiba" N 9/10-SG { the } { constitution } CAP
    "katiba" N 9/10-PL { the } { constitution } CAP
    "ukatiba" N 11/10-PL { the } { constitution } CAP
"<.$>"
    ".$" { .$ } **CLB
"<2.>"
    "2." NUM { 2. }
"<<s>>"
    "<s>" { <s> }
    "<s>" { <s> }
"<*angekuwa>"

```

```
"wa" V 1-SG3-SP VFIN { he } COND:nge INFMARK z [wa] { be }
AUX-WA SV MONOSLB CAP
"wa" V 1-SG3-SP VFIN { he } COND:nge { if } INFMARK z [wa] {
be } AUX-WA SV MONOSLB CAP
"wa" V 1-SG3-SP VFIN { she } COND:nge INFMARK z [wa] { be }
AUX-WA SV MONOSLB CAP
"wa" V 1-SG3-SP VFIN { she } COND:nge { if } INFMARK z [wa]
{ be } AUX-WA SV MONOSLB CAP
"<na>"
"na" CC { and }
"na" AG-PART { by }
"na" PREP { with }
"na" NA-POSS { of }
"na" ADV NOART { past }
"na" ADV { also }
"<uwezo>"
"wa" V 1-SG2-SP VFIN { you } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
"wa" V 3-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV MONOSLB
**SUBJ-CLB GEN-REL REL 10-PL { which }
"wa" V 11-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
"uwezo" N 11-SG { ability , capability , capacity }
"<,>"
", " COMMA { , }
"<angeamua>"
"amua" V 1-SG3-SP VFIN { he } COND:nge z [amua] { decide ,
judge , resolve } SVO
"amua" V 1-SG3-SP VFIN { he } COND:nge { if } z [amua] {
decide , judge , resolve } SVO
"amua" V 1-SG3-SP VFIN { she } COND:nge z [amua] { decide ,
judge , resolve } SVO
"amua" V 1-SG3-SP VFIN { she } COND:nge { if } z [amua] {
decide , judge , resolve } SVO
"<mchakato>"
"mchakato" N 3/4-SG { the } { process }
"<huu>"
"huu" PRON DEM :hV 3-SG { this }
"huu" PRON DEM :hV 11-SG { this }
"<wa>"
"wa" GEN-CON 3-SG { of }
"wa" GEN-CON 11-SG { of }
"wa" GEN-CON 1-SG { of }
"wa" GEN-CON 2-PL { of }
"<*katiba>"
"katiba" N 9/10-SG { the } { constitution } CAP
"katiba" N 9/10-PL { the } { constitution } CAP
"ukatiba" N 11/10-PL { the } { constitution } CAP
"<.$>"
".$" { .$ } **CLB
"<3.>"
```

```

    "3." NUM { 3. }
"<<s>>"
    "<s>" { <s> }
    "<s>" { <s> }
"<*katibu>"
    "tibu" HORT-COLLOQ:ka-e VFIN z [tibu] { cure , treat , heal
} SVO
    "tibu" NARR-COLLOQ:ka-a VFIN z [tibu] { cure , treat , heal
} SVO
    "tibu" V HORT-COLLOQ:ka-e VFIN z [tibu] { cure , treat ,
heal } SVO CAP
    "tibu" V NARR-COLLOQ:ka-a VFIN z [tibu] { cure , treat ,
heal } SVO CAP
    "katibu" N 9/6-SG HUM { the } { secretary , amanuensis }
MALE HUM CAP
"<angekuwa>"
    "wa" V 1-SG3-SP VFIN { he } COND:nge INFMARK z [wa] { be }
AUX-WA SV MONOSLB
    "wa" V 1-SG3-SP VFIN { he } COND:nge { if } INFMARK z [wa] {
be } AUX-WA SV MONOSLB
    "wa" V 1-SG3-SP VFIN { she } COND:nge INFMARK z [wa] { be }
AUX-WA SV MONOSLB
    "wa" V 1-SG3-SP VFIN { she } COND:nge { if } INFMARK z [wa]
{ be } AUX-WA SV MONOSLB
"<na>"
    "na" CC { and }
    "na" AG-PART { by }
    "na" PREP { with }
    "na" NA-POSS { of }
    "na" ADV NOART { past }
    "na" ADV { also }
"<uwezo>"
    "wa" V 1-SG2-SP VFIN { you } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 3-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV MONOSLB
**SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 11-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "uwezo" N 11-SG { ability , capability , capacity }
"<,>"
    " ," COMMA { , }
"<angeamua>"
    "amua" V 1-SG3-SP VFIN { he } COND:nge z [amua] { decide ,
judge , resolve } SVO
    "amua" V 1-SG3-SP VFIN { he } COND:nge { if } z [amua] {
decide , judge , resolve } SVO
    "amua" V 1-SG3-SP VFIN { she } COND:nge z [amua] { decide ,
judge , resolve } SVO
    "amua" V 1-SG3-SP VFIN { she } COND:nge { if } z [amua] {
decide , judge , resolve } SVO
"<mchakato>"

```

```

    "mchakato" N 3/4-SG { the } { process }
"<huu>"
    "huu" PRON DEM :hV 3-SG { this }
    "huu" PRON DEM :hV 11-SG { this }
"<wa>"
    "wa" GEN-CON 3-SG { of }
    "wa" GEN-CON 11-SG { of }
    "wa" GEN-CON 1-SG { of }
    "wa" GEN-CON 2-PL { of }
"<*katiba>"
    "katiba" N 9/10-SG { the } { constitution } CAP
    "katiba" N 9/10-PL { the } { constitution } CAP
    "ukatiba" N 11/10-PL { the } { constitution } CAP
"<.$>"
    ".$" { .$ } **CLB

```

We see that the verb with -nge- marker has two readings, one with the gloss 'if' and another without. The one with the gloss is used in conditional clauses, and the other one in other cases.

The result after disambiguation is in (19)

```

(19)
"<1.>"
    "1." NUM { 1. }
"<<s>>"
    "<s>" { <s> }
"<*ningekuwa_na>"
    "wa_na" V 1-SG1-SP VFIN { *i } COND:nge { if } INFMARK z
[wa] AUX-WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
    "uwezo" N 11-SG { ability } @<P
"<,>"
    ", " COMMA { , }
"<ningeamua>"
    "amua" V 1-SG1-SP VFIN { *i } COND:nge z [amua] { decide }
SVO @FMAINVtr+OBJ>
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process } @OBJ
"<huu>"
    "huu" PRON DEM :hV 3-SG { this } @<NDEM
"<wa>"
    "wa" GEN-CON 3-SG { of } @GCON
"<*katiba>"
    "katiba" N 9/10-SG { the } { *constitution } CAP @<GN
"<.$>"
    ".$" { .$ } **CLB
"<2.>"
    "2." NUM { 2. }
"<<s>>"

```



```
"<s>" { <s> }
"<*angekuwa_na>"
    "wa_na" V 1-SG3-SP VFIN { he } COND:nge { if } INFMARK z
[wa] AUX-WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
    "uwezo" N 11-SG { ability } @<P
"<,>"
    "," COMMA { , }
"<angeamua>"
    "amua" V 1-SG3-SP VFIN { he } COND:nge z [amua] { decide }
SVO @FMAINVtr+OBJ>
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process } @OBJ
"<huu>"
    "huu" PRON DEM :hV 3-SG { this } @<NDEM
"<wa>"
    "wa" GEN-CON 3-SG { of } @GCON
"<*katiba>"
    "katiba" N 9/10-SG { the } { *constitution } CAP @<GN
"<.$>"
    ".$" { .$ } **CLB
"<3.>"
    "3." NUM { 3. }
"<<s>>"
    "<s>" { <s> }
"<*katibu>"
    "katibu" N 9/6-SG HUM { the } { secretary } MALE HUM INITCAP
@SUBJ
"<angekuwa_na>"
    "wa_na" V 1-SG3-SP VFIN NO-SP-GLOSS COND:nge { if } INFMARK
z [wa] AUX-WA SV MONOSLB V { have } @FMAINVintr
"<uwezo>"
    "uwezo" N 11-SG { ability } @<P
"<,>"
    "," COMMA { , }
"<angeamua>"
    "amua" V 1-SG3-SP VFIN { he } COND:nge z [amua] { decide }
SVO @FMAINVtr+OBJ>
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process } @OBJ
"<huu>"
    "huu" PRON DEM :hV 3-SG { this } @<NDEM
"<wa>"
    "wa" GEN-CON 3-SG { of } @GCON
"<*katiba>"
    "katiba" N 9/10-SG { the } { *constitution } CAP @<GN
"<.$>"
    ".$" { .$ } **CLB
```

Note that in the conditional clause, the reading with ‘if’ was selected, while in the main clause the one without ‘if’ was selected. After modifying the word order, the result is in (20).

(20)

```
( NUM { 1. } ) ( "<<s>>" { <s> } ) ( { if } ) :( V 1-SG1-SP VFIN {
*i } COND:nge INFMARK z AUX-WA SV CAP V { have } ) ( N 11-SG {
ability } ) ( COMMA { , } ) ( V 1-SG1-SP VFIN { *i } COND:nge z {
decide } SVO ) :( PRON DEM :hV 3-SG { this } ) :( N 3/4-SG {
process } @OBJ ) ( GEN-CON 3-SG { of } ) ( N 9/10-SG { the } {
*constitution } CAP ) ( ".$" { .$ } **CLB )
( NUM { 2. } ) ( "<<s>>" { <s> } ) ( { if } ) :( V 1-SG3-SP VFIN {
he } COND:nge INFMARK z AUX-WA SV CAP V { have } ) ( N 11-SG {
ability } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he } COND:nge z {
decide } SVO ) :( PRON DEM :hV 3-SG { this } ) :( N 3/4-SG {
process } @OBJ ) ( GEN-CON 3-SG { of } ) ( N 9/10-SG { the } {
*constitution } CAP ) ( ".$" { .$ } **CLB )
( NUM { 3. } ) ( "<<s>>" { <s> } ) ( { if } ) :( N 9/6-SG HUM {
the } { secretary } MALE HUM INITCAP @SUBJ ) :( V 1-SG3-SP VFIN
NO-SP-GLOSS COND:nge INFMARK z AUX-WA SV V {have } ) ( N 11-SG {
ability } ) ( COMMA { , } ) ( V 1-SG3-SP VFIN { he } COND:nge z {
decide } SVO ) :( PRON DEM :hV 3-SG { this } ) :( N 3/4-SG {
process } @OBJ ) ( GEN-CON 3-SG { of } ) ( N 9/10-SG { the } {
*constitution } CAP ) ( ".$" { .$ } **CLB )
```

The English glosses are converted into surface form (21).

(21)

```
( NUM { 1. } )
( "<<s>>" { <s> } )
( { *if } )
:( V 1-SG1-SP VFIN { *i } COND:nge INFMARK :z { :would } AUX-WA SV
CAP V { have } )
( N 11-SG { ability } )
( COMMA { , } )
( V 1-SG1-SP VFIN { *i } COND:nge :z { :would } { decide } SVO )
:( PRON DEM :hV 3-SG { this } )
:( N 3/4-SG { process } @OBJ )
( GEN-CON 3-SG { of } )
( N 9/10-SG { the } { *constitution } CAP )
( ".$" { .$ } **CLB )
( NUM { 2. } )
( "<<s>>" { <s> } )
( { *if } )
:( V 1-SG3-SP VFIN { he } COND:nge INFMARK :z { :would } AUX-WA SV
CAP V { have } )
( N 11-SG { ability } )
( COMMA { , } )
( V 1-SG3-SP VFIN { he } COND:nge :z { :would } { decide } SVO )
:( PRON DEM :hV 3-SG { this } )
```

```
:( N 3/4-SG { process } @OBJ )
( GEN-CON 3-SG { of } )
( N 9/10-SG { the } { *constitution } CAP )
( ".$" { .$ } **CLB )
( NUM { 3. } )
( "<<s>>" { <s> } )
( { *if } )
:( N 9/6-SG HUM { the } { secretary } MALE HUM INITCAP @SUBJ )
:( V 1-SG3-SP VFIN NO-SP-GLOSS COND:nge INFMARK :z { :would } AUX-
WA SV V { have } )
( N 11-SG { ability } )
( COMMA { , } )
( V 1-SG3-SP VFIN { he } COND:nge :z { :would } { decide } SVO )
:( PRON DEM :hV 3-SG { this } )
:( N 3/4-SG { process } @OBJ )
( GEN-CON 3-SG { of } )
( N 9/10-SG { the } { *constitution } CAP )
( ".$" { .$ } **CLB )
```

And finally the translation (22).

(22)

1. If I would have ability, I would decide this process of the Constitution.
2. If he would have ability, he would decide this process of the Constitution.
3. If the secretary would have ability, he would decide this process of the Constitution.

#### 4.2 Conditional clauses using the *-ngali-* marker

The *-ngali-* marker refers normally to completed action. However it is sometimes used without reference to time, whereby its meaning is the same as *-nge-*. Here we use it in the sense of completed action. Consider the analysed sentences in (23).

(23)

```
"<4.>"
  "4." NUM { 4. }
"<<s>>"
  "<s>" { <s> }
  "<s>" { <s> }
"<*ningalikuwa>"
  "wa" V 1-SG1-SP VFIN { *i } COND:ngali INFMARK z [wa] { be }
AUX-WA SV MONOSLB CAP
  "wa" V 1-SG1-SP VFIN { *i } COND:ngali { if } INFMARK z [wa]
{ be } AUX-WA SV MONOSLB CAP
"<na>"
  "na" CC { and }
  "na" AG-PART { by }
  "na" PREP { with }
  "na" NA-POSS { of }
  "na" ADV NOART { past }
  "na" ADV { also }
```

```

"<uwezo>"
    "wa" V 1-SG2-SP VFIN { you } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 3-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV MONOSLB
**SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 11-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "uwezo" N 11-SG { ability , capability , capacity }
"<,>"
    "," COMMA { , }
"<ningaliamua>"
    "amua" V 1-SG1-SP VFIN { *i } COND:ngali z [amua] { decide ,
judge , resolve } SVO
    "amua" V 1-SG1-SP VFIN { *i } COND:ngali { if } z [amua] {
decide , judge , resolve } SVO
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process }
"<huu>"
    "huu" PRON DEM :hV 3-SG { this }
    "huu" PRON DEM :hV 11-SG { this }
"<wa>"
    "wa" GEN-CON 3-SG { of }
    "wa" GEN-CON 11-SG { of }
    "wa" GEN-CON 1-SG { of }
    "wa" GEN-CON 2-PL { of }
"<*katiba>"
    "katiba" N 9/10-SG { the } { constitution } CAP
    "katiba" N 9/10-PL { the } { constitution } CAP
    "ukatiba" N 11/10-PL { the } { constitution } CAP
"<.$>"
    ".$" { .$ } **CLB
"<5.>"
    "5." NUM { 5. }
"<<s>>"
    "<s>" { <s> }
    "<s>" { <s> }
"<*angalikuwa>"
    "wa" V 1-SG3-SP VFIN { he } COND:ngali INFMARK z [wa] { be }
AUX-WA SV MONOSLB CAP
    "wa" V 1-SG3-SP VFIN { he } COND:ngali { if } INFMARK z [wa]
{ be } AUX-WA SV MONOSLB CAP
    "wa" V 1-SG3-SP VFIN { she } COND:ngali INFMARK z [wa] { be
} AUX-WA SV MONOSLB CAP
    "wa" V 1-SG3-SP VFIN { she } COND:ngali { if } INFMARK z
[wa] { be } AUX-WA SV MONOSLB CAP
"<na>"
    "na" CC { and }
    "na" AG-PART { by }
    "na" PREP { with }
    "na" NA-POSS { of }
    "na" ADV NOART { past }

```

```

    "na" ADV { also }
"<uwezo>"
    "wa" V 1-SG2-SP VFIN { you } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 3-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV MONOSLB
**SUBJ-CLB GEN-REL REL 10-PL { which }
    "wa" V 11-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV
MONOSLB **SUBJ-CLB GEN-REL REL 10-PL { which }
    "uwezo" N 11-SG { ability , capability , capacity }
"<,>"
    " ," COMMA { , }
"<angaliamua>"
    "amua" V 1-SG3-SP VFIN { he } COND:ngali z [amua] { decide ,
judge , resolve } SVO
    "amua" V 1-SG3-SP VFIN { he } COND:ngali { if } z [amua] {
decide , judge , resolve } SVO
    "amua" V 1-SG3-SP VFIN { she } COND:ngali z [amua] { decide
, judge , resolve } SVO
    "amua" V 1-SG3-SP VFIN { she } COND:ngali { if } z [amua] {
decide , judge , resolve } SVO
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process }
"<huu>"
    "huu" PRON DEM :hV 3-SG { this }
    "huu" PRON DEM :hV 11-SG { this }
"<wa>"
    "wa" GEN-CON 3-SG { of }
    "wa" GEN-CON 11-SG { of }
    "wa" GEN-CON 1-SG { of }
    "wa" GEN-CON 2-PL { of }
"<*katiba>"
    "katiba" N 9/10-SG { the } { constitution } CAP
    "katiba" N 9/10-PL { the } { constitution } CAP
    "ukatiba" N 11/10-PL { the } { constitution } CAP
"<.$>"
    ".$" { .$ } **CLB
"<6.>"
    "6." NUM { 6. }
"<<s>>"
    "<s>" { <s> }
    "<s>" { <s> }
"<*katibu>"
    "tibu" HORT-COLLOQ:ka-e VFIN z [tibu] { cure , treat , heal
} SVO
    "tibu" NARR-COLLOQ:ka-a VFIN z [tibu] { cure , treat , heal
} SVO
    "tibu" V HORT-COLLOQ:ka-e VFIN z [tibu] { cure , treat ,
heal } SVO CAP
    "tibu" V NARR-COLLOQ:ka-a VFIN z [tibu] { cure , treat ,
heal } SVO CAP

```

"katibu" N 9/6-SG HUM { the } { secretary , amanuensis }  
 MALE HUM CAP  
 "<angalikuwa>"  
 "wa" V 1-SG3-SP VFIN { he } COND:ngali INFMARK z [wa] { be }  
 AUX-WA SV MONOSLB  
 "wa" V 1-SG3-SP VFIN { he } COND:ngali { if } INFMARK z [wa]  
 { be } AUX-WA SV MONOSLB  
 "wa" V 1-SG3-SP VFIN { she } COND:ngali INFMARK z [wa] { be }  
 AUX-WA SV MONOSLB  
 "wa" V 1-SG3-SP VFIN { she } COND:ngali { if } INFMARK z  
 [wa] { be } AUX-WA SV MONOSLB  
 "<na>"  
 "na" CC { and }  
 "na" AG-PART { by }  
 "na" PREP { with }  
 "na" NA-POSS { of }  
 "na" ADV NOART { past }  
 "na" ADV { also }  
 "<uwezo>"  
 "wa" V 1-SG2-SP VFIN { you } z [wa] { be } V AUX-WA SV  
 MONOSLB \*\*SUBJ-CLB GEN-REL REL 10-PL { which }  
 "wa" V 3-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV MONOSLB  
 \*\*SUBJ-CLB GEN-REL REL 10-PL { which }  
 "wa" V 11-SG-SP VFIN { it } z [wa] { be } V AUX-WA SV  
 MONOSLB \*\*SUBJ-CLB GEN-REL REL 10-PL { which }  
 "uwezo" N 11-SG { ability , capability , capacity }  
 "<,>"  
 ", " COMMA { , }  
 "<angaliamua>"  
 "amua" V 1-SG3-SP VFIN { he } COND:ngali z [amua] { decide ,  
 judge , resolve } SVO  
 "amua" V 1-SG3-SP VFIN { he } COND:ngali { if } z [amua] {  
 decide , judge , resolve } SVO  
 "amua" V 1-SG3-SP VFIN { she } COND:ngali z [amua] { decide  
 , judge , resolve } SVO  
 "amua" V 1-SG3-SP VFIN { she } COND:ngali { if } z [amua] {  
 decide , judge , resolve } SVO  
 "<mchakato>"  
 "mchakato" N 3/4-SG { the } { process }  
 "<huu>"  
 "huu" PRON DEM :hV 3-SG { this }  
 "huu" PRON DEM :hV 11-SG { this }  
 "<wa>"  
 "wa" GEN-CON 3-SG { of }  
 "wa" GEN-CON 11-SG { of }  
 "wa" GEN-CON 1-SG { of }  
 "wa" GEN-CON 2-PL { of }  
 "<\*katiba>"  
 "katiba" N 9/10-SG { the } { constitution } CAP  
 "katiba" N 9/10-PL { the } { constitution } CAP  
 "ukatiba" N 11/10-PL { the } { constitution } CAP

```
"<.$>"
  ".$" { .$ } **CLB
```

Also here we see that the -ngali-marker has two interpretations, one with the gloss 'if' and another without gloss. The disambiguation procedure selects the correct interpretation (24).

```
(24)
"<4.>"
  "4." NUM { 4. }
"<<s>>"
  "<s>" { <s> }
"<*ningalikuwa_na>"
  "wa_na" V 1-SG1-SP VFIN { *i } COND:ngali { if } INFMARK z
[wa] AUX-WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
  "uwezo" N 11-SG { ability } @<P
"<,>"
  "," COMMA { , }
"<ningaliamua>"
  "amua" V 1-SG1-SP VFIN { *i } COND:ngali z [amua] { decide }
SVO @FMAINVtr+OBJ>
"<mchakato>"
  "mchakato" N 3/4-SG { the } { process } @OBJ
"<huu>"
  "huu" PRON DEM :hV 3-SG { this } @<NDEM
"<wa>"
  "wa" GEN-CON 3-SG { of } @GCON
"<*katiba>"
  "katiba" N 9/10-SG { the } { *constitution } CAP @<GN
"<.$>"
  ".$" { .$ } **CLB
"<5.>"
  "5." NUM { 5. }
"<<s>>"
  "<s>" { <s> }
"<*angalikuwa_na>"
  "wa_na" V 1-SG3-SP VFIN { he } COND:ngali { if } INFMARK z
[wa] AUX-WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
  "uwezo" N 11-SG { ability } @<P
"<,>"
  "," COMMA { , }
"<angaliamua>"
  "amua" V 1-SG3-SP VFIN { he } COND:ngali z [amua] { decide }
SVO @FMAINVtr+OBJ>
"<mchakato>"
  "mchakato" N 3/4-SG { the } { process } @OBJ
"<huu>"
  "huu" PRON DEM :hV 3-SG { this } @<NDEM
"<wa>"
```

```

    "wa" GEN-CON 3-SG { of } @GCON
"<*katiba>"
    "katiba" N 9/10-SG { the } { *constitution } CAP @<GN
"<.$>"
    ".$" { .$ } **CLB
"<6.>"
    "6." NUM { 6. }
"<<s>>"
    "<s>" { <s> }
"<*katibu>"
    "katibu" N 9/6-SG HUM { the } { secretary } MALE HUM INITCAP
@SUBJ
"<angalikuwa_na>"
    "wa_na" V 1-SG3-SP VFIN NO-SP-GLOSS COND:ngali { if }
INFMARK z [wa] AUX-WA SV MONOSLB V { have } @FMAINVintr
"<uwezo>"
    "uwezo" N 11-SG { ability } @<P
"<,>"
    "," COMMA { , }
"<angalamua>"
    "amua" V 1-SG3-SP VFIN { he } COND:ngali z [amua] { decide }
SVO @FMAINVtr+OBJ>
"<mchakato>"
    "mchakato" N 3/4-SG { the } { process } @OBJ
"<huu>"
    "huu" PRON DEM :hV 3-SG { this } @<NDEM
"<wa>"
    "wa" GEN-CON 3-SG { of } @GCON
"<*katiba>"
    "katiba" N 9/10-SG { the } { *constitution } CAP @<GN
"<.$>"
    ".$" { .$ } **CLB

```

The translation is in (25).

(25)

4. *If I would have had ability, I would have decided this process of the Constitution.*
5. *If he would have had ability, he would have decided this process of the Constitution.*
6. *If the secretary would have had ability, he would have decided this process of the Constitution.*

#### 4.3 The *-nge-* and *-ngali-* markers in non-conditional sentences

When the markers are used in environments outside the conditional clause, they are translated without using the conjunction 'if'. This is reflected in disambiguation. Consider the disambiguated sentences in (26).

(26)

```
"<7.>"
```



```
"7." NUM { 7. }
"<<s>>"
"<s>" { <s> }
"<*ningekuwa_na>"
"wa_na" V 1-SG1-SP VFIN { *i } COND:nge INFMARK z [wa] AUX-
WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
"uwezo" N 11-SG { ability } @<P
"<.$>"
".$" { .$ } **CLB
"<8.>"
"8." NUM { 8. }
"<<s>>"
"<s>" { <s> }
"<*angekuwa_na>"
"wa_na" V 1-SG3-SP VFIN { he } COND:nge INFMARK z [wa] AUX-
WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
"uwezo" N 11-SG { ability } @<P
"<.$>"
".$" { .$ } **CLB
"<9.>"
"9." NUM { 9. }
"<<s>>"
"<s>" { <s> }
"<*katibu>"
"katibu" N 9/6-SG HUM { the } { secretary } MALE HUM INITCAP
@SUBJ
"<angekuwa_na>"
"wa_na" V 1-SG3-SP VFIN NO-SP-GLOSS COND:nge INFMARK z [wa]
AUX-WA SV MONOSLB V { have } @FMAINVintr
"<uwezo>"
"uwezo" N 11-SG { ability } @<P
"<.$>"
".$" { .$ } **CLB
"<10.>"
"10." NUM { 10. }
"<<s>>"
"<s>" { <s> }
"<*ningalikuwa_na>"
"wa_na" V 1-SG1-SP VFIN { *i } COND:ngali INFMARK z [wa]
AUX-WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
"uwezo" N 11-SG { ability } @<P
"<.$>"
".$" { .$ } **CLB
"<11.>"
"11." NUM { 11. }
"<<s>>"
"<s>" { <s> }
"<*angalikuwa_na>"
```

```

    "wa_na" V 1-SG3-SP VFIN { he } COND:ngali INFMARK z [wa]
AUX-WA SV MONOSLB CAP V { have } @FMAINVintr
"<uwezo>"
    "uwezo" N 11-SG { ability } @<P
"<.$>"
    ".$" { .$ } **CLB
"<12.>"
    "12." NUM { 12. }
"<<s>>"
    "<s>" { <s> }
"<*katibu>"
    "katibu" N 9/6-SG HUM { the } { secretary } MALE HUM INITCAP
@SUBJ
"<angalikuwa_na>"
    "wa_na" V 1-SG3-SP VFIN NO-SP-GLOSS COND:ngali INFMARK z
[wa] AUX-WA SV MONOSLB V { have } @FMAINVintr
"<uwezo>"
    "uwezo" N 11-SG { ability } @<P
"<.$>"
    ".$" { .$ } **CLB

```

The surface forms of English glosses are in (27).

```

(27)
( NUM { 7. } )
( "<<s>>" { <s> } )
( V 1-SG1-SP VFIN { *i } COND:nge INFMARK :z { :would } AUX-WA SV
CAP V { have } )
( N 11-SG { ability } )
( ".$" { .$ } **CLB )
( NUM { 8. } )
( "<<s>>" { <s> } )
( V 1-SG3-SP VFIN { *he } COND:nge INFMARK :z { :would } AUX-WA SV
CAP V { have } )
( N 11-SG { ability } )
( ".$" { .$ } **CLB )
( NUM { 9. } )
( "<<s>>" { <s> } )
( N 9/6-SG HUM { *the } { secretary } MALE HUM INITCAP @SUBJ )
( V 1-SG3-SP VFIN NO-SP-GLOSS COND:nge INFMARK :z { :would } AUX-
WA SV V { have } )
( N 11-SG { ability } )
( ".$" { .$ } **CLB )
( NUM { 10. } )
( "<<s>>" { <s> } )
( V 1-SG1-SP VFIN { *i } COND:ngali INFMARK :z { :would } { :have
} AUX-WA SV CAP V { :had } )
( N 11-SG { ability } )
( ".$" { .$ } **CLB )
( NUM { 11. } )
( "<<s>>" { <s> } )

```

```
( V 1-SG3-SP VFIN { *he } COND:ngali INFMARK :z { :would } {  
:have } AUX-WA SV CAP V { :had } )  
( N 11-SG { ability } )  
( ".$" { .$ } **CLB )  
( NUM { 12. } )  
( "<<s>>" { <s> } )  
( N 9/6-SG HUM { *the } { secretary } MALE HUM INITCAP @SUBJ )  
( V 1-SG3-SP VFIN NO-SP-GLOSS COND:ngali INFMARK :z { :would } {  
:have } AUX-WA SV V { :had } )  
( N 11-SG { ability } )  
( ".$" { .$ } **CLB )
```

The original text and final translation is in (28).

(28)

7. Ningekuwa na uwezo.
8. Angekuwa na uwezo.
9. Katibu angekuwa na uwezo.
10. Ningalikuwa na uwezo.
11. Angalikuwa na uwezo.
12. Katibu angalikuwa na uwezo.

7. *I would have ability.*
8. *He would have ability.*
9. *The secretary would have ability.*
10. *I would have had ability.*
11. *He would have had ability.*
12. *The secretary would have had ability.*

## 5 Conclusion

This paper has dealt with ambiguities encountered in translating conditional clauses from Swahili to English. These ambiguities concern the 'when' and 'if' type distinctions, as well as the tense of the conditional clauses. Both are unmarked in such conditional clauses, where the *-ki-* marker is used. Using criteria in the main clause it was possible to resolve the ambiguities of tense. Also other less ambiguous methods of formulating conditional clauses were introduced. All these types of conditional clauses were correctly translated into English.