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Actual Clauses in Lubukusu

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Abstract
In this chapter* we show that the inventory of clause-types in Lubukusu (Bantu, Luyia) includes a clause type that, so far as we know, has not yet been described as present in any other language. Lubukusu has *actual clauses*, a morphologically distinctive form of subordinate clause which entails that the utterer is committed not only to the truth of the proposition described by the clause, but that the event or state described by the proposition cannot be unrealized at the moment of utterance. We argue that the actual clause is tenseless (distributionally and semantically) and that it is subjunctive-like insofar as it introduces sets of “accessible” possible worlds where the truth of the proposition can be evaluated, based on the predicate that introduces the actual clause as a complement. Actuals depart from subjunctives, however, insofar as the actual world of the speaker must always be one of the possible worlds accessible to the predicate’s attitude-holder, and since the proposition must be true in the speaker’s world to be well-formed, it is not hypothetical, but, in effect, anti-subjunctive. After we have established the fixity of actual clause meaning and shown the contrasting flexibility of interpretation for infinitives (verbs bearing a class 15 prefix), we show that the rigidity of the actual clause reveals an interesting interaction between the inventory of clause types in Lubukusu and the classes of predicates that select clauses as complements.

1.0 Some Basic Properties of Actual Clauses

The most striking feature of the actual clause is that it must be interpreted as making a statement about events or states known to be true by the utterer (UTT) at the time of utterance, and cannot describe any event or state that has not already happened or verifiable at the moment of speech. Except for a few contexts which we note and put aside, actual clauses are always embedded,

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so it is even more striking that, if the actual clause is a complement to a propositional attitude verb that does not normally commit UTT to any opinion about the truth of the verb complement clause, the use of the actual morphology entails the truth of the complement proposition. For example, in (1) the actual complement entails that the going did actually happen (an "actuality entailment") and so the negation of this entailed truth in the following clause is judged contradictory.

- 1a) Wekesa á-a-bólel-a Wafula a-a-cha
 Wekesa SM.c1-PST-tell-fv Wafula SM.c1-ACT-go-fv
 'Wekesa told Wafula to go (and Wafula did go)

- b)*Wekesa á-a-bólel-a Wafula a-a-cha ne kakhali
 Wekesa SM.c1-PST-tell-fv Wafula SM.c1-ACT-go-fv and though
 Wafula sé á-a-ch-á tá
 Wafula NEG SM.c1-PST-go-fv not
 'Wekesa told Wafula to go (and Wafula did go), but Wafula did not go.'

The actuality entailment does not originate in the matrix verb in these cases, as indicated by the acceptability of (2a,b), where the embedded verb is subjunctive or as a class 15 infinitive, respectively. For these two kinds of complements, even with the same matrix verb, there is no actuality entailment, hence no contradiction induced when it is asserted that the events described by these complements are known not to have happened.

- 2a) Wekesa á-a-bólel-a Wafula khú-ch-a (ne kakhali Wafula se
 Wekesa SM.c1-PST-tell-fv Wafula c15-go-fv (and though Wafula NEG
 á-a-ch-a tá)
 SM.c1-PST-go-fv not)
 'Wekesa told Wafula to go, but Wafula did not go.'

- b) Wekesa á-a-bólel-a Wafula á-ch-é (ne kakhali Wafula
 Wekesa SM.c1-PST-tell-fv Wafula SM.c1-go-SBJV (and though Wafula
 se á-a-ch-a tá)
 NEG SM.c1-PST-go-fv not)
 'Wekesa told Wafula he was allowed/had the possibility to go, but Wafula did not go.'

We take "assertion" to be a speech act that posits a proposition as true, and it appears that ACT clauses are never speech acts, since they are always embedded. We assume for the purposes of discussion that a proposition P is "entailed by a proposition P'" if whenever P' is true, then P is true by virtue of its relationship to P'. The entailment induced by ACT morphology is that if 'X ACT-eat the cake', then UTT believes that X ate the cake.

Actual clause morphology is distinctive in Lubukusu. It is realized in the same morphological space on inflected Lubukusu verbs where tense

morphemes normally occur (as in (3), details suppressed), that is, in the space between the subject marker (=SM) and the object marker (=OM), though it is not clear how many affixes can occur between SM and OM. The simple past and the actual are distinguished by both vowel length and tone. The former has an initial short vowel marked by high tone, while the latter has an initial long vowel with an unmarked tone. The chart in (4) provides a full paradigm first with class 1 morphology and then with class 9.

- 3) Template for verbs: SM-TNS-OM-ROOT-Extensions- (SBJV)-fv.

- 4) Tense and modality expression on Lubukusu verbs

	SM.c1-TNS-eat	SM.c9-TNS-eat	
Simple past:	álya	yálya	SM-a-Verb-a
Today past:	áliile,	eliile	SM-Verb-il-e
Recent past:	áaliíle,	yáliíle	SM-a-Verb-il-e
Perfective:	ààlya,	yààlya	SM-à-Verb-a
Actual:	aalya,	yaalya	SM-a-Verb-a
Subjunctive:	ályé,	élyé	SM-Verb-e
Infinitive:	khulya	khulya	c15-Verb-a

Indicative clauses in a past tense might appear to have interpretations similar to the actual clause interpretation, but they differ in crucial ways. The matrix indicative commits UTT to the truth of the proposition at the time of utterance, but these are assertions, not entailments, and such assertions can be about future or modally conditioned events, which is not permitted with actual clauses.

- 5a) Wafula á-a-li-á ka-ma-tore
 Wafula SM.c1-PST-fv c6-c6-banana
 'Wafula ate bananas'
 b) Wafula á-kha-li-e ka-ma-tore
 Wafula SM.c1-FUT-fv c6-c6-banana
 'Wafula will eat bananas.'
 c) Wafula [a-nyal-a] á-li-é ka-ma-tore
 Wafula SM.c1-would-fv SM.c1-eat-SBJV c6-c6-banana
 'Wafula would eat bananas.'

Example (5c) is acceptable with the subjunctive on the matrix verb 'eat', with or without the modal *anyala*. The interpretation will vary accordingly, however. Without *anyala*, (5c) expresses permission, and with *anyala* the sentence indicates possibility. The "permission" reading without the modal verb shows clearly that subjunctive morphology can mark matrix verbs.

Moreover, unlike indicatives, the actual is never possible as a matrix clause, unless it is in a particular cause-and-consequence construction.¹

¹ There is another use of ACT morphology that we do not explore here. In a football (soccer) match, for example, the commentator may say, "John takes the ball, he evases Peter and shoots". In this context, all the verbs have ACT morphology. We hope to address

- 6a)*Wafula a-a-li-a ka-ma-toore
 Wafula SM.c1-ACT-eat-fv c6-c6-banana
 'Wafula ate the bananas.'
 b) Wafula a-a-li-a ka-ma-toore ba-ba-aana b-a-lil-a
 Wafula SM.c1-ACT-eat-fv c6-c6-banana c2-c2-child SM.c1-ACT-cry-fv
 'Wafula ate the bananas, so the children cried.'
 'Because Wafula ate the bananas, the children cried.'

In the absence of the subordinating 'because' or 'so', however, it is possible that the proper translation is the second one, where the actual clause 'cause' is, in fact, subordinated. Under either translation, however, (6b) appears to be the only counterexample to the claim that actual clauses are always subordinated. See fn.2 for a possible account of the exception. Thus actual clauses are rigid in their commitment to the actuality entailment, are morphologically distinctive, and are (nearly) always subordinate.

2.0 More Interpretive Differences between Actual Clauses and Others

In one of the early papers that addressed questions of how clausal types are selected, Kiparsky and Kiparsky (1970) distinguished between factive and non-factive clausal complements. The clausal complement of *regret* is factive because the proposition the complement clause denotes is presupposed by the utterer to be true, while the complement of *believe* carries no such presupposition.

- 7a) Alice regrets that Wekesa married Mary.
 b) Alice believes that Wekesa married Mary.

If Alice regrets that Wekesa married Mary, then the speaker assumes that the he and the hearer accept it as a fact that Wekesa married Mary, but for (7b), the speaker is not committed to the assumption that Wekesa married Mary. The difference shows up under negation of the matrix verb in that the factive presupposition is preserved under negation.

- 8a) Alice does not regret that Wekesa married Mary
 b) Alice does not believe that Wekesa married Mary

Even though (8a) is negated, it is still the case that the speaker assumes that both he and the addressee accept it as a fact that Wekesa married Mary. The same semantic distinction is found in Lubukusu, as illustrated in (9) and (10) corresponding to (7) and (8), respectively. (Notice that the word for 'hope', *-subil-*, is the same as that for 'believe').

- 9a) Alice á-esóny-a bali Wekesa á-a-béy-a Maria
 Alice SM.c1-regret-fv that Wekesa SM.c1-PST-marry-fv Maria
 'Alice regrets that Wekesa married Mary.'
 b) Alice á-subil-a a-li Wekesa á-a-béy-a Maria

this usage in future work.

- Alice SM.c1-believe-fv c1-that Wekesa SM.c1-PST-marry-fv Maria
 'Alice believes that Wekesa married Mary.'
 10a) Alice sé á-esóny-a bali Wekesa á-a-béy-a
 Alice NEG SM.c1-regret-fv that Wekesa SM.c1-PST-marry-fv
 Maria tá
 Maria not
 'Alice does not regret that Wekesa married Mary.'
 b) Alice sé á-subil-a a-li Wekesa á-a-béy-a
 Alice NEG SM.c1-believe-fv c1-that Wekesa SM.c1-PST-marry-fv
 Maria tá
 Maria not
 'Alice does not believe that Wekesa married Mary.'
 The non-factive verb *-subil-*, however, can have an actual complement in Lubukusu (just as non-factive 'tell' can in (1)).
 11) Wekesa á-a-subil-a o-mw-aana wewe a-a-many-a Wele
 Wekesa SM.c1-PST-believe-fv c1.c1-child his SM.c1-ACT-know-fv God
 'Wekesa believed/ hoped for his child [know God] (and she did/does)'

Moreover, Lubukusu psych verbs, which take factive complements, do not permit the verb in their CP complement to bear actual morphology (for a suggestion as to why, see fn.3).

- 12a) *Maria á-isindukh-a bali a-a-khil-a ku-mu-inyawwe
 Mary SM.c1.PST-surprise-fv that SM.c1-ACT-win c3-c3-game
 'Mary was surprised that she ACT-won the game'
 b) *Maria á-isony-a bali a-a-khil-a ku-mu-inyawwe
 Mary SM.c1.PST-regret-fv that SM.c1-ACT-win c3-c3-game
 'Mary regretted that she ACT-won the game.'
 c) *Maria á-a-sangal-a bali a-a-khil-a ku-mu-inyawwe
 Mary SM.c1.PST-happy-fv that SM.c1-ACT-win c3-c3-game
 'Mary was happy that she ACT-won the game.'

Infinitival complements can be interpreted as factive or not, depending on the matrix verb.

- 13a) Maria á-isindukh-a khu-khil-a ku-mu-inyawwe
 Mary SM.c1.PST-surprise-fv c15-win c3-c3-game
 'Mary was surprised to have won the game.'
 b) Maria á-isony-a khu-khil-a ku-mu-inyawwe
 Mary SM.c1.PST-regret-fv c15-win c3-c3-game
 'Mary regretted to have won the game.'
 c) Maria á-a-sangal-a khu-khil-a ku-mu-inyawwe
 Mary SM.c1.PST-happy-fv c15-win c3-c3-game
 'Mary was happy to have won the game.'

All of (13a-c) presuppose that Mary won the game, in contrast to (2a), where the proposition that Wafula went is not presupposed. Verbs that permit actual clause complements in Lubukusu are those compatible with clausal complements that describe events that might not have taken place, but that could have taken place, such as those in (14).

- 14) Wekesa á-eny-a/á-a-pang-a/á-a-khak-a a-a-ch-a engo
 Wekesa SM.c1.PST-want/plan/try-fv SM.c1-ACT-go-fv home
 'Wekesa wanted/planned/tried to go, and he did.'

It seems that actual clauses, like subjunctive clauses, are indexed to the time of the matrix event. In as much as planning precedes action, for example, the clausal complement event must follow the main clause event, regardless of what tense is on the matrix verb, a point to which we will return below. However, if the matrix verbs in (14) are in the future tense, then actual complementation is unacceptable, even though c15 infinitive complements for these verbs are still possible.

- 15a) *Wafula á-khá-eny-e a-a-bey-a Maria
 Wafula SM.c1-FUT-want-fv SM.c1-ACT-marry-fv Mary
 b) Wafula á-khá-eny-e khu-bey-a Maria
 Wafula SM.c1-FUT-want-fv c15-marry-fv Mary
 'Wafula will want to marry Mary.'
- 16a) *Wafula á-khá-khak-e a-a-ly-a e-ng'eni
 Wafula SM.c1-FUT-try-fv SM.c1-ACT-eat-fv c9-fish
 b) Wafula á-khá-khak-e khu-ly-a e-ng'eni
 Wafula SM.c1-FUT-try-fv c15-eat-fv c9-fish
 'Wafula will try to eat the fish.'
- 17a) *Wafula á-khá-pang-e a-a-ly-a e-ng'eni
 Wafula SM.c1-FUT-plan-fv SM.c1-ACT-eat-fv c9-fish
 b) Wafula á-khá-pang-e khu-ly-a e-ng'eni
 Wafula SM.c1-FUT-try-fv c15-eat-fv c9-fish
 'Wafula will plan to eat the fish.'

Once the event described by the complement clause is indexed to take place after the present, the actual clause is not possible, because UTT can only verify events described by actual clauses on the basis of the 'actual' world, not any unrealized one. C15 infinitives, which lack the actuality entailment, are not restricted in this way.

3.0 Actuality Entailment

The interpretation required by actual clauses is similar to what Hacquard (2006) has described for French when past perfect is applied to the verbs *pouvoir* and *devoir* (see also Bhatt, 1999).

- 18a) Pour aller au zoo, Jane pouvait prendre le train.
 For go.INF to.the zoo, Jane be.able-PST.IMPV take.INF the train

- 'To go to the zoo, Jane could have taken the train.'
- b) Pour aller au zoo, Jane a pu prendre le train.
 For go.INF to.the zoo, Jane have.PST be.able.PCPL take.INF the train
 'To go to the zoo, Jane was able to take the train (and did).'

As Hacquard puts it, "The truth conditions of [(18a)] are equivalent to its English translation: there is a world among all accessible worlds in which Jane goes to the zoo where she took the train to get there. This is compatible with a scenario in which Jane did not take the train in reality (nor went to the zoo, for that matter). Things are different with [(18b)]: for the sentence to be true, Jane must have taken the train in the actual world. **Any continuation stating that she, in fact, did not take the train, will come out as a contradiction.**"

Hacquard proposes that the relation between modality and events is scopal, and that modality>event yields possible worlds, while event>modality yields the actual world. She still has to add that when the event (or aspect) scopes over the modal, there is still a world variable on the aspect that must default to the actual world. The leading idea, however, is that the actuality entailment arises when perfective aspect scopes over the modal.

Further particulars of the French construction that induces an actuality entailment do not match the Lubukusu actual clauses. First of all, the French effect can hold in matrix clauses, as in (18), whereas Lubukusu actual clauses cannot be matrix clauses. Although there is an interaction between particular verbs and perfective morphology in French (and in other languages where the actuality entailment is discussed, see Bhatt, 1999 and Homer, 2011, for example), actual morphology and the actuality entailment associated with it is distinctive to Lubukusu. The Lubukusu morphology does not lose its actuality entailment (and remain acceptable) depending on what verb it is associated with. For example, the past perfect yields the actuality entailment in French with matrix root modals but not with epistemic modals. The French construction is thus sensitive to particular verbs and particular modals. Moreover, contexts of belief do not affect the result in Lubukusu. Both 'believe' and matrix 'want' can have actual clause complements, though only the latter interacts with past perfect in Hacquard's story.

These distinctions between the modal-verb-dependent actuality entailments and Lubukusu actual clauses are challenging for the treatments of the modality-perfective interaction on which Hacquard's account is based. The actuality entailment of actual clauses appears to be independent of the matrix (selecting) verb, so an adaptation to Lubukusu of this interaction would require treating the single ACT morpheme as decomposing into modal and perfective parts, but the ACT morpheme in Lubukusu does not

distinguish between a perfective morpheme and a modal morpheme such that one could scope over the other. More basically, it is not the aspect of the selecting verb that matters in Lubukusu, but the world of UTT.

We will not attempt to fit our account into Hacquard's proposal, but we are guided by the intuition that the actuality entailment arises from an interaction with modality. We propose that ACT is indeed like a subjunctive with respect to the verb that selects for it, but with a twist. A matrix subjunctive clause which has the semantic force of 'might be' (e.g., *John might have eaten fish*) is judged as true just in case there is at least one possible world accessible to the speaker which has a past in which John has eaten fish, but there is no commitment to that world being the actual world. When a subjunctive is embedded, the possible worlds are delimited by the embedding predicate (e.g., 'want', 'plan', 'think') with respect to the reported subject of those predicates (not UTT, unless the reported subject is in the first person). A normal subjunctive complement just posits that there is a possible planned/wanted/believable world accessible to the reported subject in which the proposition it denotes could be true.² What ACT requires, however, is that UTT's world *u* must be one such world in which *P* is evaluated and *P* is true in *u*. So, for example, an ACT complement to 'want' will entail that the actual world is a world in which what *X* wanted is true.

19) Actual Clause Interpretation:

- If *P* is a proposition expressed by an actual clause *P*^{ACT}, then
- P* is true in at least one of the set of worlds accessible to the reported subject of the verb selecting *P*^{ACT},
 - UTT's world is in the set of accessible worlds and
 - P* is true in the utterer's world.

The first condition captures the intuition that the reported subject may, for example, have wanted for a state of affairs to hold, but had no certainty that it did or would hold. The second condition insures that UTT's world is within the set of possible worlds accessible to the subject of the predicate that takes the actual clause as a complement. This condition is not met when the matrix verb is in the future, for example, because UTT's world is indexed to UTT's present and UTT cannot directly observe future worlds.

² More technically, the set of "accessible" possible worlds for the reported subject in which *P* (the clausal complement) can be evaluated for truth are distinguished from the set of worlds by whatever conditions or relations (*R*) are imposed by the selecting predicate. In the literature, epistemic, deontic, and ability modals are distinguished by the nature of *R* introduced by the modal in question (e.g., *should* invokes worlds in which laws or normal courses of events hold, *could* invokes worlds in which an ability can be realized, etc.) We are treating *R* for Lubukusu ACT and SBJV as determined by the selecting predicate. These inflections do not specify *R* on their own, nor do they access the common ground. For a useful summary of the literature on modality, see Hacquard (2009).

The last condition insures that according to what UTT knows, the wanted state of affairs holds in UTT's world, the actual world according to UTT. On the basis of (19a), it is now clear why ACT clauses must be embedded. The accessibility relations required are two-fold; one involving accessibility for UTT, the other involving accessibility for a reported subject, and it is the latter relation that requires embedding.³ The 'anti-subjunctive' flavor of ACT arises from the way that existence in the actual world undermines the irrealis denotation of the subjunctive, while still preserving the possibility that for the reported subject, there could have been worlds other than the actual one in which *P* might have been true.⁴

Notice, however, that (19) depends on our description of what makes up the actual world, and one curious condition that ACT seems to place on that world, which one may think of as a set of eventualities (states and events) that propositions can describe, is that there are no negative eventualities in it (e.g., a state of not having eaten a fish, for example),

20) *Wekesa á-subil-a ali Wafula se a-a-ly-a
Wekesa SM.c1-believe-fv that Wafula NEG M.c1-ACT-eat-fv
e-ng'eni tac9-fish NEG

'Wekesa believes that Wafula did not eat a fish (and he did not).'

The translation in (20) can be 'saved' if the negated subordinate clause is changed to a *khu*-infinitive. The restriction that actual clauses cannot be negated does not follow from the inclusion of the actual world amongst the set of belief worlds in which negative statements are true, and so it is necessary to replace (19) with something like (21), which includes (21d).

21) Actual Clause Interpretation:

- If *P* is a proposition expressed by an actual clause *P*^{ACT}, then
- P* is true in at least one of the worlds accessible to the reported subject of the verb selecting *P*^{ACT}
 - UTT's world is one of the worlds accessible to the reported subject,
 - P* is true in UTT's world and
 - the eventuality described by *P* is in the set of eventualities that exist in the actual world.

³ From this perspective, the consequence clause construction in (6) would have to be interpreted like a conditional, in that the antecedent clause posits a hypothetical situation that introduces a set of possible worlds where the children are disappointed and then the *P*^{ACT} indicates that the actual world is one of those worlds where the antecedent is true. Therefore the consequent must also be true in the actual world. We have not determined whether or not such an account is sustainable.

⁴ The incompatibility of actual with factive complementation probably has to do with factive presupposition. Factive complements are presupposed by the speaker to be already accepted as true by the addressee, while actual clauses appear to presuppose the opposite, that is, the speaker presupposes actual clauses are informative to the addressee.

The need for (21d), or something like it, remains a curious, but very interesting puzzle.⁵

4.0 Actual Clauses Are Tenseless

The Lubukusu verbs *ény-* 'want', *pang-* 'plan', and *khak-* 'try' are not compatible with an indicative clause, but they are compatible with infinitive complements, subjunctive complements, and actual clause complements.

22) 'Wekesa wanted/ planned/ tried [X-go home]'

- a) Wekesa á-ény-á/á-a-páng-a/á-a-khák-a khu-ch-a engo (infinitive)
Wekesa SM.c1.PST-want-fv/plan-fv/try-fv c15-go-fv home
'Wekesa wanted/planned/tried to go home.'
- b) Wekesa á-ény-á/á-a-páng-a/á-a-kháka á-ch-é engo
Wekesa SM.c1.PST-want-fv/plan-fv/try-fv SM.c1-go-SBJV home
'Wekesa wanted/planned/tried to go home.'
- c) *Wekesa á-ény-á/páng-a/khák-a á-a-ch-a engo
Wekesa SM.c1.PST-want-fv/plan-fv/try-fv SM.c1-PST-go home
(simple past)
- d) Wekesa á-ény-á/páng-a/kháka a-a-ch-a engo
Wekesa SM.c1.PST-want-fv/plan-fv/try-fv SM.c1-ACT-go-fv home
'Wekesa wanted/planned/tried to go home.'

By contrast, the verbs *-khilw-* 'fail', *-lob-* 'refuse' and *-khingilil-* 'prevent' are only fully compatible with infinitives.

- 23a) Wekesa á-a-khilw-a/lób-a khu-ch-a engo (infinitive)
Wekesa SM.c1-PST-fail-fv/refuse-fv c15-go-fv home
'Wekesa failed/refused to go home.'
- b)??Wekesa á-a-khilw-a/lób-a á-ch-é engo (subjunctive)
Wekesa SM.c1-PST-fail-fv/refuse-fv SM.c1-go-SBJV home
'Wekesa failed/refused [go home].'
- c) *Wekesa á-a-khilw-a/lób-a á-a-ch-á engo (indicative)
Wekesa SM.c1-PST-fail-fv/refuse-fv SM.c1-PST-go-fv home
'Wekesa failed/refused [went home].'
- d) *Wekesa á-a-khilw-a/lób-a a-a-ch-a engo (actual)
Wekesa SM.c1-PST-fail-fv/refuse-fv SM.c1-ACT-go-fv home
'Wekesa failed/refused to go home.'

⁵ In i. the actual clause is acceptable in the scope of matrix negation,

i. Wekesa se-a-subil-a a-li Wafula a-a-siim-a e-ng'eni ta
Wekesa NEG-SM.c1-believe-fv c1-that Wafula SM.c1-ACT-like-fv c9-fish not
'Wekesa does not believe that Wafula likes fish – in fact, Wafula does like fish.'

Our analysis correctly predicts this interpretation. In this context, the set of belief worlds accessible to Wekesa are all worlds in which P of PACT is evaluated by Wekesa as false, but that set of worlds also includes the actual world, and in the actual world, the world of UTT, P is true, as evaluated by UTT. Since the matrix clause introduces a set of accessible possible worlds that does not exclude the actual world, the actual clause should be possible because UTT's evaluation of those worlds differs from Wekesa's evaluation.

- 24a) Wekesa á-a-khingilil-a Maria khu-ch-a engo (infinitive)
Wekesa SM.c1-PST-prevent-fv Mary c15-go-fv home
'Wekesa prevented Mary from going home.'
- b)??Wekesa á-a-khingilil-a Maria á-ch-é engo (subjunctive)
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-go-SBJV home
'Wekesa prevented Mary [go home].'
- c) *Wekesa á-a-khingilil-a Maria á-a-ch-a engo (indicative)
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-PST-go-fv home
'Wekesa prevented Mary she went home.'
- d) *Wekesa á-a-khingilil-a Maria a-a-ch-a engo (actual)
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-ACT-go-fv home
'Wekesa prevented Mary she went home.'

The verbs in the complement clauses in (23a) and (24a) are bear the noun class 15 (c15) marker that is most typically identified as an 'infinitive' in Narrow Bantu languages. The complement clauses in (23b) and (24b) are subjunctive, which indicates, at the least, that the event it describes is unrealized with respect to the tense-indexed moment of the event described by the matrix (clausal complement-selecting) verb, but since these verbs seem to preclude worlds where the proposition they describe is true, subjunctives are not really acceptable. Actuals are rejected more forcefully, since these verbs assert that there are no worlds accessible to Wekesa where the complement proposition is true, hence the actual world could not both be accessible to Wekesa and a world in which the complement proposition is true for UTT (i.e., (21a) and (21c) cannot both be satisfied). As shown in (23c,d), neither of these verb types permits a true indicative clause (a clause that permits the full variety of tenses consistent with usual restrictions on sequence of tense), though as (25a,b) illustrate, the appearance of an actual clause following the matrix verb is possible, but as a consequent clause, not a complement (probably as in the manner of (6b)).

- 25a) Wekesa á-a-khilw-a/lób-a a-a-ch-a engo
Wekesa SM.c1-PST-fail-fv/refuse-fv SM.c1-ACT-go-fv home
'Wekesa failed/refused (something) and he went home (later).'
- b) Wekesa á-a-khingilil-a Maria a-a-ch-a engo
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-ACT-go-fv home
'Wekesa prevented Mary (from doing something) and he (Wekesa) went home (later).'

The absence of indicatives as complements to certain verbs is especially notable because Lubukusu has three past tenses, but none of the past tenses is possible in the complement of a verb a with meaning like 'want', 'try' or 'prevent'.

- 26a) Wekesa *á-ény-á/*páng-a/?khak-a a-ch-il-e (immediate past)
Wekesa SM.c1.PST-want-fv/plan-fv/try-fv SM.c1-go-TNS-fv
'Wekesa wanted/planned/tried he went.'

- b) Wekesa *á-eny-á/*páng-a/*khak-a áá-ch-il-e (intermediate past)
 Wekesa SM.c1.PST-want-fv/plan-fv/try-fv SM.c1-go-TNS-fv
 'Wekesa wanted/planned/tried he went.'

Semantically, it appears that it is unnecessary to suppose that actual clauses are tensed at all, since evaluation in the actual world is sufficient to determine whether or not they are true, rather than any crucial indexation to events at a time relative to that of utterance. We take the defining property of 'tense' as indexing the time of an event directly or indirectly to the utterance time, and so a tense morpheme must play this role by definition. However, both subjunctive and actual can be thought of as addressing only the ordering of events, such that both must describe events relative to the event of the matrix predicate, typically after, but not necessarily so, as (27) illustrates.

- 27) Ne khu-á-b-a ba-ba-ana khu-á-eny-a
 when SM.1st.c2-PST-be-fv c2-c2-child SM.1st.c2-PST-want-fv

khu-li o-mu-aana w-a-efwe á-b-é
 c2.1st-that c1-c1-child SM.c1-ASS-PRON.c2.1st SM.c1-be-fv.SBJV
 o-mu-somi o-mu-layi, mala se á-a-b-á tá
 c1-c1-student c1-c1-good but NEG SM.c1-PST-be-fv not
 'When we were young, we wanted that our child be a good student, but she never was.'

In (27), the hypothetical event described by the subjunctive clause would have been situated in a time before the utterance time. We take the apparent indexing to utterance time for the actual to be a product of the requirement of ACT that the actual world be one of the desired worlds in which P of P^{ACT} is true. The actual world happens to index the time of speech.

Our position is consistent with arguments in the literature that subjunctive is not a tense (e.g., even in Italian, where it can bear tense morphology, see Giorgi and Pianesi, 1997), and our analysis of actual clauses treats the accessibility relations they bear to the reported subject to be identical to those of the subjunctive. In this sense, both the actual and the subjunctive are not really about times indexed to an event, but about worlds. This implies that, at least in Lubukusu, the requirement that a complement clause be tenseless does not choose between subjunctive and actual (or infinitive), all else being equal.

There are many cases, however, where a verb that takes a tenseless clause complement (subjunctive or c15 infinitive) does not permit an actual clause complement, which we otherwise might expect to be possible on strictly syntactic grounds. These are cases, however, where actual clause interpretation is blocked because the tense and/or lexical entailment of the

matrix verb does not permit a complement to describe a realized event (as in (23)-(24)). If these considerations suffice to eliminate the cases where other tenseless clauses are possible but actuals are not, then we conclude, on semantic and distributional grounds, that actual clauses are tenseless.

Perhaps the only fact that suggests ACT could actually be a tense is the fact that the ACT affix occupies a position in a morphological slot between SM and OM where tense otherwise appears (which is why actuals were at first hard to detect). However, the recent past in Lubukusu, -ile, is a suffix, so there is no tidy one-to-one correspondence between morphological position and semantic category in the Lubukusu verb. The subjunctive is also a suffix and not a tense (see the mention of Italian below), so an assumption that only tense affixes are in complementary distribution with each other is also not sustainable.

Though actual clauses are tenseless clauses, they are also notably different from c15 infinitives. Actual clauses and subjunctive clauses both co-occur with subject agreement (SM) and both subjunctive and actual clauses can appear with a complementizer that is also compatible with tensed clauses. Subjunctives permit the agreeing complementizer *ali* as illustrated in (30a,b) in the next section. Actuals normally appear without a complementizer, but sometimes they permit the non-agreeing complementizer *bali*, as illustrated in (28), though not the agreeing complementizer. (For discussion of complementizer agreement in Lubukusu with the subject of the clausal complement taking verb, see Diercks 2010 and 2013).

- 28) Wafula á-a-nyál-a bali/*a-li a-a-ch-a e-Harvard.
 Wafula SM.c1-PST-able-fv that/c1-that SM.c1-ACT-go-fv c23-Harvard
 'Wafula managed to go to Harvard.'

A larger discussion of the relations between clause type, verb type and complementizer possibilities is beyond the scope of this paper, but the distribution of complementizers and agreement appears to align subjunctive and actual with tensed clauses rather than c15 infinitives.

Subjunctives are marked for agreement in many languages, including those where the analysis of subjunctive (e.g., in Italian by Giorgi and Pianesi) is that they are tenseless (although their morphological realization can be conditioned by tense). Even in Italian, however, the complementizer that appears with subjunctive clauses is the same as the one with tensed clauses (*che*) and *che* cannot occur in infinitives. Thus these facts about Lubukusu subjunctives do not appear typologically too exceptional. If actual clauses are the 'anti-subjunctives' insofar as potential-actual opposition fills a particular semantic space, then it is perhaps not surprising that actual clauses share

structural properties with subjunctives, although we will not explore particular structural proposals for reasons of space.

Subjunctive and actual clauses are thus notably distinct from c15 infinitives (also with respect to control properties, not illustrated here). If structural parallelism with c15 infinitives is not an appropriate measure of tenselessness, however, then structural and morphological differences between subjunctives and actuals, on the one hand, and c15 infinitives, on the other, do refute the hypothesis that actuals and subjunctives are tenseless.

5.0 Consequences for Clausal Selection and Theories Thereof

The striking contrast between c15 infinitives, which are comfortable with more than one sort of interpretation, and actual clauses, which are completely rigid semantically, helps to reveal some boundary conditions on the theory of clausal complementation.⁶

For English, the problem has most typically been thought of as one of selection, where a given verb determines which sorts of complements it is compatible with, for example, the verb *state* selects an indicative complement and not an infinitive. This cannot be the whole story for Lubukusu, however. Consider the difference in interpretation between (29a) and (29b).

- 29a) Wekesa á-a-nyál-a khu-khw-ombakh-a enju, ne kakhali
 Wekesa SM.PST-able-fv c15-c15-build-fv house and thought
 se á-a-nyóol-a bu-bw-aangu tá
 NEG SM.c1-PST-find-fv c14-c14-chance not
 'Wekesa was able to build the house, but he never got the chance.'
- b) Wekesa á-a-nyál-a o-ombakh-a enju, (*ne kakhali
 Wekesa SM.PST-manage-fv SM.c1.ACT-build-fv house and though
 se á-a-nyóol-a bu-bw-aangu tá)
 NEG SM.c1-PST-find-fv c14-c14-chance not
 'Wekesa managed to build the house, *but he never got the chance.'

Lubukusu uses the same verb for the meanings 'be able' and 'manage', but the translation of the verb is altered, in effect, by what actual clause interpretation requires. Thus (29b) has the interpretation that Karttunen (1971) described in English as implicative, that is, the English verb *manage* entails that the event described by its complement infinitive has indeed taken place in the world of UTT. With respect to the contrast between (29a) and (29b), the result is that the verb meaning can be thought of as an ability modal that introduces a set of possible worlds in at least one of which

⁶ The relationship between predicates and the clausal complements is part of the Afranaph Sister Project, the Clausal Complementation and Selection Project, directed by Mark Baker and Ken Safir, out of which this inquiry into the nature of actual clauses has sprouted.

p is true (i.e., in which Wekesa accomplishes the task) and the PACT complement insures that the actual world is one such world.

The subjunctive/indicative contrast can also produce a shift in verb translation. The Lubukusu verb *-subil-* can mean 'hope' or 'believe', but the 'hope' reading must have the subjunctive complement.

- 30a) John ásubila ali Mary abe ne kamakoso
 John a-a-subil-a a-li Mary a-b-e ne ka-ma-koso
 John SM.c1-PST-believe-fv c1-that Mary SM.c1-be-SBJV with c6-c6-guilt
 'John hoped that Mary would be guilty.'
- b) John ásubila ali Mary ali ne kamakoso
 John a-a-subil-a a-li Mary a-a-l-I ne ka-ma-koso
 John SM.c1-PST-believe-fv c1-that Mary SM.c1-PST-be-fv with c6-c6-guilt
 'John believed/*hoped that Mary was guilty.'

The richer inventory of clause types in Lubukusu allows for the possibility that a single predicate can cover a wider semantic range than is possible for any single predicate (with respect to the same range of meanings) in a language like English, which, in this respect, has less variety in its array of clausal complements. These facts suggest that the investigation of the relation between clausal complements and the verbs that select them can be misled by translations that capture the correct sense in English, but disguise the consistency of interpretation of those verbs that receive distinct translations depending on their clausal complements.

6.0 Are Actual Clauses Typologically Rare?

So far as we can tell, there are no other kinds of clauses in known Bantu languages, or any other language family, that are quite like Lubukusu actual clauses, though we say this in the expectation that they will be discovered more broadly once researchers start looking for them. We have investigated some tangentially similar clause types in Bantu, such as the persistive (Nurse and Phillipson, 2006), which entails that a state or activity is still going on, but it is clear that this is not the meaning of the actual. If it were, (31) should sound like a contradiction, but it does not.

- 31) Wekesa a-eny-a a-a-kon-a khu-saa n-dala
 Wekesa SM.c1.PST-want-fv SM.c1.ACT-sleep-fv for-hour c9-one
 'Wekesa wanted to sleep for an hour and he did, but he is awake now.'

Nurse, Rose and Hewson (2010:1-2) discuss the distinctions between perfective/factative and perfect, but neither of these two categories quite works for the Lubukusu actual. They describe the factative (semantically like 'perfective') as follows
 'Functionally, when used with non-stative or dynamic verbs, it typically represents past, complete, situations, but when used with stative verbs, it

represents current, non-past, incomplete, states, that is, presents or futures." As (31) shows, perfective on their description does correspond appropriately to actual. They treat the perfect as describing complete events for dynamic verbs and states continuing to the present for stative verbs. However, these aspects all appear to be possible in matrix clauses and they also suggest that some of them allow future tense (e.g., in Yoruba) which the actual does not permit. Moreover, Lubukusu has a clear instance of the perfect, distinct from the actual, and its distribution is limited to indicative clauses (matrix and subordinate).

Van der Wal (2012) reports on four varieties of 'situative' clauses in Makhuwa and these are like actuals insofar as they are always subordinated. However, they are unlike actual clauses in that they do not appear to have an actuality entailment, but rather serve to order the eventuality they describe with respect to the event described by some other verb. In this respect, van der Wal does not regard them as tensed, though the morphology shows up in the same morphological space as tense and aspect, another similarity to actual clauses. There are cases in Lubukusu in which the actual does seem to have something of a situative flavor, as in (32).

- 32) Wekesa a-a-saal-a o-mu-aana wewe khu-ch-a
 Wekesa SM.c1-PST-pray-fv c1-c1-child his c15-go-fv
 engelekha ta, ne o-wa Wekesa a-a-ch-a (engelekha)
 abroad NEG, and c1-of Wekesa SM.c1-ACT-go-fv (abroad)
 'Wekesa prayed (and) his child did not travel abroad, and Wekesa's child did travel (as a result of Wekesa praying/but Wekesa's prayers were insufficient)'

In this case, the actual can be understood as an outcome (even implausibly, as a result), and thereby has a reading of a subsequently ordered event, much as certain situative clauses have been reported to have. Unlike Lubukusu actuals, however, situatives are never complements in Makhuwa and do not appear to involve an actuality entailment (though van der Wal was not looking for such effects).⁷

Finally, it is possible to consider the actual as a form of evidential, especially because of the indexical effect of picking out the belief world of UTT. Evidentials, however, more typically indicate how something comes to be known, not simply that it is necessarily true. Lubukusu complementizers alternations can introduce implications of doubt on the part of UTT about the likely truth of a complement clause (see Diercks, 2010:288-291), but so far we don't see how this observation helps us to better understand actual clauses

⁷ For a recent attempt to characterize situatives, persistives and perfectives in Swati, see Nichols (2011).

7.0 Conclusion

We have established that the interpretation of an actual clause (PACT) is sensitive both to the selecting predicate and to UTT. The selecting predicate delimits a set of possible worlds (wanted worlds, belief worlds, ability worlds) in which the proposition P of PACT can be evaluated for truth (as a subjunctive would be) but in addition ACT requires that the world of UTT be one of the worlds in which P is evaluated as true (which undermines the signature 'irrealis' interpretation that subjunctives often have). The source of the delimitation of possible worlds is the matrix predicate and a limitation to that source appears to be why ACT clauses must be embedded. For these reasons, we have treated ACT as more like a modal than an aspect. Actual clauses are tenseless in that they do not directly index speech time, even though their interpretation is tied to the world of UTT, hence indirectly to speech time. Although ACT can appear to be aspect-like in that it entails that clauses with dynamic verbs describe events that are complete at the moment of utterance (whereas events expressed by stative verbs can be ongoing or not), this is rather due to a restriction to represent positive eventualities and the link to the word of the speaker, which is indexed to the present. The rigidity of ACT interpretation has been shown to impose itself on the interpretation of verbs it co-occurs with as a complement, raising questions about the nature of clausal selection. Although actual clauses have not been attested in other languages, the syntactic and interpretive mechanisms we have appealed to are not exotic, and so we expect ACT clauses, or clauses with essentially the same properties, will be found in other languages.

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Tense and Negation in Yoruba

Olúṣẹyẹ Adéṣolá

Abstract

The status of Negation in Universal Grammar has been controversial in spite of about five decades of contributions from generative grammarians (Fujita 1975, Pollock 1989, Chomsky 1989, Ouhalla 1990, Déprez and Pierce 1993, Ernst 1995, Awoyale 1995, Decahine 1995, Lona 2000, Harves 2002, Wiltschko 2002, Landau 2002, Kaiser 2006, Spencer 2008, Aboh 2010, Alqassas 2015, de Sousa 2015, and Albu 2017). Its status is even less clear in Yoruba where limited generative grammar work has been done on Negation. This chapter will focus on one of the questions plaguing negation in the literature – its relationship with Tense. Zanuttini (1996) claims that negation could only be present in a sentence if it has Tense as its complement while Dechaine (1995) notes that negation is actually in Tense in Yoruba. Zanuttini (1996:181) concludes (based on her comparative analysis of English and Romance languages (like Italian, Spanish, Catalan, Portuguese, Romanian, and Galician) that the negation phrase (NegP) is parasitic on the Tense phrase (TP) – if NegP, then TP. She adds that the NegP must be generated to the left of the TP to fulfill the selectional requirements of the head of the Neg P. This chapter would show that neither of the two claims is accurate for Yoruba. Yoruba negations are not parasitic on Tense because negation can occur in complementary distribution with Tense. This chapter also provides empirical evidence to show that negation is not in Tense in Yoruba. Other syntactic elements that are also in complementary distribution with the non-future tense marker are not in Tense. So, negation cannot be in Tense either. Also, negation markers do co-occur with the future tense marker in Yoruba. This indicates that Tense and Negation are able to head distinct terminal nodes. The chapter expands on the proposal sketched in Awoyale (1995) that negation heads its own NegP in Yoruba. In fact, Yoruba can project multiple NegPs with only one TP.

1. Introduction

Scholars have explored the occurrence of negation in a lot of human languages (Fujita 1975, Adewole 1991, Déprez and Pierce 1993, Ernst 1995, Lona 2000, Kim and Sag 2002, Landau 2002, and Fabunmi 2013). One of the main claims is that negation can project and head its own phrase – NegP as in (1) (Pollock 1989, Chomsky 1989, Ouhalla 1990, Awoyale 1995, and Wiltschko 2002).