

The Typology of Actual Clauses in Bantu

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1. Introduction

Safir, Sikuku & Baker (2020) (henceforth SS&B), demonstrate the existence of the so-called “actual clause” in Lubukusu (JE. 31c). The nature of this clause is understood by contrasting it with matrix indicative clauses and clausal complementation contexts. In a matrix sentence, if the speaker uses the past tense as in *Nafula ate the cake*, then the speaker is committed to the truth of the statement because it is an assertion. We take the act of making an assertion to mean that a proposition is introduced by the speaker, that the speaker is committed to the truth of the proposition, and normally that the proposition is new information. If we take a sentence like *Wekesa says/believes that Nafula ate the cake*, the speaker’s assertion is that Wekesa has a particular belief, but the speaker has no commitment to the truth of *Nafula ate the cake*. What is striking about actual clauses is that when the actual is used in the *says/believes* complement, then the speaker is also committed to the truth of *Nafula ate the cake*. In SS&B, this property was treated as an actuality entailment, much in the way that the statement *John managed to eat the cake* entails that John ate the cake (with whatever effort it required). In this essay we take a different tack, treating actual clauses as embedded assertions and so the speaker is committed to the truth of the complement clause proposition.

In languages like English, the speaker’s commitment to the truth of the embedded proposition can be achieved by adding a special adverb or a continuation attached to the sentence, as shown in parentheses in (1). In addition, there are certain verbs, like *manage*, that entail the truth of their complement proposition. For examples like (2), the parenthetical sounds redundant.

- 1) Aya told Mary to eat the fish (and she did eat the fish)
- 2) Aya managed to eat the fish (#and she did eat the fish)

In English, there is no special clause type that encodes the parentheticals in (1) and (2), but in many Bantu languages there is distinct morphology, bolded in (3), which adds the force of the parenthetical. We gloss the morpheme in question as ACT (for actual). The parenthetical clause in translation is used to make the reading clear, but the meaning in question is denoted only by the presence of *-ka-* in the subordinate clause.

- 3) Aya a-li-mw-amb-ia Marya a-**ka**-m-la samaki
Aya SM.c1-PST-OM1-tell-FV Mary SM.c1-ACT-OM1-eat
9.fish
Aya told Mary to eat fish (and she did eat fish) **[Kiswahili]**

The actuality effect in (2) has its origin in the nature of what the matrix verb *manage* means, but actual morphology in the Bantu languages discussed here adds the force of what we characterize with an English parenthetical in (3). SS&B treated the speaker’s commitment to the truth of the

Commented [AN1]: I wonder about this example. For me, there’s something missing. To make the meaning clear I would need something like: Aya alimwambia Marya kula samaki akamla. I’ve asked a Swahili speaker to confirm/contradict my intuition.

Commented [AN2]: I now received an answer and I can repeat it here anonymously: “sisi wote wawili tunaona tafsiri ya sentensi siyo sahihi! Kwa sababu hatujui muktadha wa maongezi yenyewe inatuwia vigumu kupata tafsiri nzuri. Ila “Aya told Mary to eat fish” tungeitafsiri kama ifuatavyo: “Aya alimwambia Marya kumla/amle samaki (akamla samaki)”. Justine, I need you to comment on this and whether you think this would lead us to adjust what we say.

complement clause proposition as parallel to the actuality entailment effect in (2). In this essay, we will argue that the source of the speaker's commitment arises from the way actual clauses are licensed by the clauses they are dependent on. That is, we propose that actual clauses are licensed by a "contingent antecedent clause". Our approach generalizes to explain other non-complement uses of actual/narrative clause types identified by the exact same morphology.

We will proceed as follows. In section 2 we will review the actual clause complement distributions and describe the effects it produces. Section 3 analyzes the complement clause actual properties from the embedded-assertion point of view. In section 4, we briefly show that what we are calling actual morphology in Bantu more generally is also used to signal clause-chaining in narrative. We show that our account predicts that the actual clause complement effect follows from the same semantic function that ACT morphology signals in clause-chaining contexts. In our conclusion, we discuss what typological implications our proposal might have across Bantu, and perhaps more generally.

2.0 Identifying actual clauses as complements

The special clause in (3) is what is characterized as the actual clause. Note that what we are calling actual morphology has been described variously in Bantu and other languages as a narrative/consecutive/sequential tense/aspect marker (Dahl 1977, 1985, Johnson 1979, Schroeder 2011, Englebretson and Wambui 2015). The actual clause distribution diverges from what is generally expected of the same morpheme used in narrative contexts. In particular, the actual occurs as a complement of non-factive verbs while the narrative use seems to be a case of clause-chaining. We shall have more to say about the relation between the actual complement effect and narrative clauses in section 3. Nevertheless, we show that the actual clause complement effect, though not discussed in the literature outside of Lubukusu, has a larger presence in the Bantu family of languages.

The actual clause displays morphological, syntactic, and interpretive variations in its distribution. For the cases we discuss, it is exponed by a prefix on the complement clause verb. The prefix occupies the typical tense position between the subject marker (SM) and object marker (OM) on an inflected verb. In (4a) and (4b) the actual clause marker is shown in bold for Ekegusi (JE.42) and Kiswahili, respectively.

- 4a) Obuchi a-ga-tem-el-a o-mw-ana a-**ka**-gend-a
 Obuchi SM.c1-PST-try-APPL-FV c1-c1-child SM.c1-ACT-go-FV
 e-yunibasiti
 c23-university
 Obuchi tried for the child to go to the university (and he did go)[**Ekegusi**]
- b) Juma a-li-m-jarib-i-a m-toto a-**ka**-end-a chuo ki-kuu
 Juma SM.c1-PST-OM-try-APPL-FV c1-child SM.c1-ACT-go-FV c7.institution c7-big
 Juma tried for the child to go to the university (and he did go) [**Kiswahili**]

Actual clauses are tenseless and are dependent on the tense of the matrix clause for time reference. Notice that actual complement clauses can be compatible with verbs that do not take

indicative clauses as complements (SS&B 2020), but that do take subjunctive and/or infinitive complements. The applicative in (4) requires an OM where there is no complement clause, and in Kiswahili, where the OM is generally agreed to be an agreement marker (e.g., Keach 1995) it appears where it is expected if the object of the applicative is present. These facts are evidence that the actual clause is indeed a complement clause. Additional evidence that the actual clause is a complement is that it allows extraction, as illustrated for Lubukusu and Kiswahili.

- 5a) Y-a-b-a eng'eni niyo Wekesa asubila/enya/aloma Marya
 SM9-PST-be-FV c9.fish that-c9 Wekesa SM.c1.PST-believe/want/say Marya
 a-a-ly-a
 SM.c1-ACT-eat-FV
 "It was the fish that Wekesa believed/wanted/said Mary ACT-ate". [Lubukusu]
- b) Ilikuwa samaki ndiyo Wekesa aliamini/taka/sema Marya akaila
 I-li-kuw-a samaki ndiyo Wekesa a-li-amini/ taka/sema Marya
 SM.c9-PST-be-FV c9.fish that-c9 Wekesa SM.c1.PST-believe/want/say Marya
 a-ka-i-l-a
 SM.c1-ACT-eat-FV [Kiswahili]

The typical assumption is that adjuncts are islands for movement unless the clause is a complement. Although there are probably certain kinds of low adjuncts that lack overt subjects that can be extracted from in English (e.g., *Which bill did John leave town without paying?*), sometimes called converbs (see Haspelmath, 1995), extraction from actual clause contexts does not fit Haspelmath's converb profile (often subjectless and gerundlike).

However, there is a result interpretation that arises with some predicates that is somewhat unlike typical complementation relations. The matrix verb event seems to have a causal relation to the truth of the preajacent proposition in most instances. Thus (4) is most naturally accepted if as a result of Juma's efforts, the child did go. Even for verbs meaning "believe", which can typically take actual clause complements, the result implication can also be present (at least for Lubukusu and Kiswahili). We return to this point later. As we establish, however, certain semantic properties of the matrix predicate must be compatible with actual clause entailments.

Essentially, the actual clause complement describes events that must have happened according to the utterer of the sentence (henceforth, UTT). In several languages like English, this is expressed by the past tense in a matrix clause, but whether or not past in a subordinate clause describes an event that must have happened depends on what sort of matrix verb is used. When the actual is used in a complement, then the complement must also be something that UTT asserts to have actually happened or to be the case. This is shown in the contrast between the pairs of sentences for Lubukusu, Kiswahili and Luganda in (6-8) respectively. In response to a reviewer, we show (with a Luganda example) that the presence of an indirect object in the matrix clause does not change the influence of ACT morphology. Examples for other languages in our sample include just the ACT clause version to save space, as in (9).

- 6a) Wekesa á-bol-el-a o-mw-aan a-li Nafula á-ly-a

Commented [AN3]: It would have been nicer to have really equivalent examples here. It would make the argument stronger. From Kiswahili we know that an infinitive can be used in the complement clause only if the subject is identical or if it can easily be retrieved. So a selection of a different verb form could also be due to the different construction type. Do we have an example for Luganda with an addressee argument in the main clause corresponding to what we see for "tel", *bol-*, in (6)? Do we have appropriate Swahili examples we could use in place of, or in addition to, Luganda? **OK, I think your data covers this.**

Wekesa SM.c1.PST-tell-APPL-FV c1-c1-child c1-that Nafula SM.c1.PST-eat-FV
 e-keki
 c9-cake
 Wekesa told the child that Nafula ate the cake [**Lubukusu**]

- b) Wekesa a-bol-el-a Nafula a-a-ly-a e-keki
 Wekesa SM.c1.PST-tell-FV Nafula SM.c1-**ACT**-eat-FV c9-cake
 Wekesa told Nafula to eat the cake (and she did eat the cake)

7a) Aya a-li-mw-amb-ia Marya a-ka-m-la samaki
 Aya SM.c1-PST-OM1-tell-FV Mary SM.c1-**ACT**-OM1-eat
 9.fish
 Aya told Mary to eat fish (and she did eat fish) [**Kiswahili**]

- b) Peter alimwambia mtoto kuwa Mary alikula keki
 Peter a-li-mwamb-i-a mtoto kuwa Maria a-li-kul-a keki
 Peter SM.c1.PST-tell-APPL-FV c1-child that Maria SM.c1.PST-eat-FV c9-cake
 Peter told the child that Mary ate the cake. [**Kiswahili**]

- 8a) Petero yagambye nti Marya yalidde kechi [**Luganda**]
 Petero a-a-gamb-ye nti Marya a-a-lidd-e kechi
 Peter SM.c1-PST-say-FV that Mary SM.c1-PST-eat cake
 Peter said that Mary ate the cake

- b) Petero yagamba/yagambye omwana nti Mary yalya/yalidde keeci.
 Peter told the child that Mary ate the cake [**Luganda**]

- c) Petero yagambye Marya nalya kechi
 Petero a-a-gamb-ye Marya n-a-a-ly-a kechi
 Peter SM.c1-PST-say-FV Mary DEP¹-SM.c1- **ACT**-eat cake
 Peter said (and) Mary ate the cake [**Luganda**]

- d) Aya yagambye Mary n'alya ekyennanja
 Aya SM.c1.PST-tell-FV Mary SM.c1-**ACT**-eat-FV c9-fish
 Aya told Mary to eat fish (and she did eat fish) [**Luganda**]

9a) Aya a-ka-mo-teb-ia Maria a-ka-ri-a enswe
 Aya SM.c1-PST-OM1-tell-FV Mary SM.c1-**ACT**-eat-FV
 c9.fish
 Aya told Mary to eat fish (and she did eat fish) [**Ekegusii**]

- b) Aya wa-ka-mw-ambir-a Marya a-**chi**-ri-a samaki
 Aya SM.c1-PST-tell-FV Mary SM.c1-**ACT**-eat-FV c9.fish
 Aya told Mary to eat fish (and she did eat fish) [**Kidigo**]

¹ DEP is a marker in Luganda that introduces the ACT clause as a dependent clause.

c) Aya a-á-bwir-ye Mariya a-ra-ri-a isamaki
 Aya SM.c1-PST-tell-FV Mary SM.c1-ACT-eat-FV c9.fish
 Aya told Mary to eat fish (and she did eat fish) [Kirundi]

Notice that the complement clauses in (a) examples of (6-8) have a past morpheme that is morphologically different from the morphology in the complement clauses in (b). In Lubukusu, the past uses a high-toned short vowel which also doubles as the class 1 SM while the actual is marked by a long toneless vowel. In Luganda, both the actual and the past are a short vowel -a- but the former is distinguished by what looks like a dependent marker *n-* which precedes the ACT. The distinctive ACT morphology is illustrated in (9a-c) for other languages in our sample. Notice also that the actual clause complements typically lack a complementizer.

The following chart presents some of the Bantu languages for which we have determined that actual clause morphology is distinctive². The first five languages are languages are the ones we will be referring to as part of our dataset, though we expect that our treatment will be able to be extended to Kikuria, Rutooro and Kikamba, which show the same morphological distinctions, but for which we do not have sufficient sentence data.

Table 1

	Lubukusu	Kiswahili	Luganda	Kidigo	Ekegusii	Kikuria	Rutooro	Kikamba
Simple Past	á-lyá	a-li-kula	y-a-lyá	w-a-rya	a-ka-rya	n-a-reye	a-ka-lyá	Ni-wa-iye
Today past	a-li-ile	a-li-kula	y-a-lidde	w-a-rya	na-rya	n-a-reye	a-li-ire	n-u-iye
Recent past	á-li-ile	a-li-kula	a-lidde	w-a-rya	N-ari-et-e	na-rea-reye	a-li-ire	n-u-na-iye
Perfective	a-a-lyá	a-sha-kula	a-lidde	a-ka-rya	o-ri-ir-e	a-a-reye	a-li-ire	n-u-iye
Actual	a-a-lyá	a-ka-kula	n-a-lidde	a-chi-rya	a-ka-rya	a-ka-reye	a-lyá	a-lye
Subjunctive	a-lye	a-le	a-lye	a-rye	a-ry-e	a-re	a-lye	a-ye
Infinitive	Khu-lyá	Kula	ku-lyá	ku-rya	Ko-rya	ko-rya	ku-lyá	Ku-ya

Actual clauses in all the languages we discuss are interpreted as making a statement about events or states known to be true by UTT at the time of the utterance and not those that have not happened. This is confirmed by a negation test applied to the complement clauses. It is expected that if a subordinate clause expresses what is believed to have actually happened in the real world, then any contradiction of the subordinate proposition results in unacceptability. In the Kiswahili and Kidigo examples in (10a-e), the follow-up negation in brackets is infelicitous because in the world of the utterer, Wafula did go and hence the truth cannot be

² The perfective marker in Lubukusu is used to express completion of an event in some ‘indefinite’ point in the past. It is a form of ‘expeditious’ perfective. The present and past perfect are marked differently with -kha- and a compound tense respectively. In Kiswahili, -sha- marks the indefinite (expeditious) perfect.

negated. Similar results are also reported for Luganda by our consultants but we do not have an example.

- 10a) Wekesa a-li-m-himiza Wafula a-**ka**-end-a [*lakani ha-a-ku-end-a]
 Wekesa SM.c1-TNS-OM1-urge Wafula SM.c1-ACT-go-FV lakini NEG-PST-15-go-FV
 Wekesa urged Wafula to go (and he did) [*and he did not go] [**Kiswahili**]
- b) Wekesa wa-mw-imiz-a Wafula a-chi-phiya-a [*ila ka-ya-phiya-a]
 Wekesa SM.c1.PST-OM-urge-FV Wafula SM.c1-ACT-go-FV [but NEG-SM.c1.PST-go-FV]
 Wekesa urged Wafula to go (and he did) [*but he did not go] [**Kidigo**]
- c) Juma a-mw-isuvie Zalo a-nyw-a yiia [*indi nda-a-nyw-a]
 Juma SM.c1.PST-OM1-urgeZalo SM.c1.ACT-drink-FV milk[but NEG-SM.c1.PST-drink-FV]
 Juma urged Zalo to drink milk (and he did), [*but he did not drink] [**Kikamba**]
- d) Wekesa asubhisya Wafula aacha [*lakini seacha ta]
 Wekesa a-subhisya-a Wafula aa-ch-a [*lakini se-a-ch-a ta]
 Wekesa SM.c1/TNS--urge-FV Wafula SM.c1/ACT-go-FV lakini NEG-PST/SM.c1-go-FV
 NEG [**Lubukusu**]
- e) Wekesa a-á-hanur-ye Wafula a-**ra**-gend-a [*ariko nti-a-á-gi-ye]
 Wekesa SM.c1-PST-urge-FV Wafula SM.c1-ACT-go-FV [*but NEG-SM.c1-PST-go-FV]
 Wekesa urged Wafula to go (and he did) [*and he did not go] [**Kirundi**]

The subordinate negation evidence also indicates that the use of an actual clause complement is a form of speech act insofar as an assertion will result in a contradiction if UTT's continuation denies it. The question then arises, as to what sort of speech act is it? We return to this question in section 3.³

³ Notice that if the matrix predicate is negated, it does not mean that the complement proposition cannot be true in the world of UTT. In this situation, we might expect actual morphology to be possible, but the evidence is not clear. Our expectation would be that actual morphology is acceptable in the scope of matrix negation as long as the complement clause proposition is not presupposed to be true (see SS&B, 198, fn.5). The morphology in (i) looks similar to actual morphology, but this marks habitual action which has happened before and still does (In English it could be something like; "Wafula likes fish, and still does". Notice also that the complementizer *a-li* is possible, which is not normally possible with an actual clause. As a result, we suspect that our prediction for this context does not necessarily borne out, but further inquiry is pending.

i. Wekesa se-a-subil-a a-li Wafula a-a-siim-a e-ng'eni ta
Lubukusu
 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.

As SS&B show for Lubukusu, the so-called actuality entailment does not originate in the matrix clause because the same matrix verb can take both subjunctive and infinitive complement clauses whose truth condition can be negated (SS&B:190).

- 11) Wekesa á-a-bólel-a Wafula khú-ch-a
 Wekesa SM.c1-PST-tell-fv Wafula c15-go-FV
 (ne kakhali Wafula se á-a-ch-a ta)
 (and though Wafula NEG SM.c1-PST-go-fv not)
 ‘Wekesa told Wafula to go, but Wafula did not go.’
- 12) Wekesa á-a-bólel-a Wafula á-ch-é
 Wekesa SM.c1-PST-tell-fv Wafula SM.c1-go-SUBJ
 (ne kakhali Wafula se á-a-ch-a tá)
 (and though Wafula NEG SM.c1-PST-go-fv not)

In contrast to the actuality entailment introduced by the predicate *manage* in English, the effect of the actuality entailment is achieved in Lubukusu by the choice of complement.

- 13a) Wekesa á-a-nyál-a khu-khw-ombakh-a enju, ne kakhali
 Wekesa SM.PST-able-fv c15-c15-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 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-able-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.)’

Since the actual ensures that what Wekesa can do, he has in fact done, the meaning of “succeed” is essentially achieved.⁴

As SS&B have shown, the speaker cannot use actual clause morphology to assert that a future event will take place, although matrix clauses with future tense or modal force are perfectly good assertions (but see 4.2). Because the actual describes true events in the real world and because they are anchored to the tense of the matrix clause, they will always be incompatible with matrix events taking place after the present. This explains why verbs in future tense cannot take actual clauses even though future tense on those verbs are compatible with both infinitive and subjunctive as shown for Lubukusu in (14), Ekegusii in (15) and Kiswahili (16).

- 14a) *Wafula á-khá-eny-e a-a-bey-a Maria [Lubukusu]

⁴ The verb *manage* in English has a lexically specified implication of effort. Since the ability verb has no such implication, when the ability verb takes an actual clause complement, the implication of succeeding *through effort* is missing in Lubukusu.

Wafula SM.c1-FUT-want-fv SM.c1-ACT-marry-fv Mary
 ‘Wafula will want that he married Mary (and he did)’

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.’

c) Wafula á-khá-eny-e a-bey-e Maria
 Wafula SM.c1-FUT-want-fv SM.c1-marry-SUBJ Mary
 ‘Wafula will want that she may marry Mary.’

15a) *Obuchi n-a-g-ani-e a-ka-nywom-e Maria [Ekegusii]
 Obuchi FOC-FUT-want-fv SM.c1-ACT-marry-fv Mary
 ‘Obuchi will want that he married Mary (and he did)’

b) Obuchi n-a-g-ani-e ko-nywom-a Maria
 Obuchi FOC-FUT-want-fv 15-marry-fv Mary
 ‘Obuchi will want to marry Mary’

c) Obuchi n-a-g-ani-e a-nywom-e Maria
 Obuchi FOC-FUT-want-fv SM.c1-marry-SUBJ.FV Mary
 ‘Obuchi will want that He may marry Mary’

16a) *Wafula atataka akamwoa Maria [Kiswahili]
 Wafula a-ta-tak-a a-ka-mw-o-a Maria

b) Wafula atataka kumwoa Maria
 Wafula a-ta-tak-a ku-mw-o-a Maria

c) Wafula atataka amwoe Maria
 Wafula a-ta-tak-a a-mw-o-e Maria

As SS&B point out for Lubukusu, verbs that take complements describing events that cannot take place cannot normally use actual either, such as verbs meaning “fail”, “prevent” or “deny permission”.

17a) *Ken ?a-li-shindw-a/a-li-kat-aa/a-li-zui-a
 Ken SM.c1-PST-fail-FV/SM.c1-PST-deny-FV SM.c1-PST-prevent-FV
 a-ka-end-a kwenye sherehe
 SM.c1-ACT-go-FV in the ceremony
 ‘Ken failed/deny permission/prevented (and) he went to the ceremony’ [Kiswahili]

b) Ken akhilwa/aloba/akhingilila aacha engelekha
 Ken a-khilw-a/a-lob-a/ a-khingilil-a a-a-ch-a engelekha
 Ken SM.c1-PST-fail-FV/SM.c1-PST-deny-FV SM.c1-PST-prevent-FV SM.c1-ACT-go-

FV

[Lubukusu]

- c) *Ken a-á-ra-nanir-u-e/a-á-ra-ank-ye/
 Ken SM.c1-PST-DISJ-fail-PASS-FV/SM.c1-PST-DISJ-refuse-FV/
 a-á-buz-ir-u-e a-**ra**-gend-a mu birori
 SM.c1-PST-DISJ-prevent-APPL-PASS-FV SM.c1-ACT-go-LOC-ceremony
 Ken failed/deny permission/prevented (and) he went to the ceremony' [Kirundi]⁵

To summarize so far, we have established that the actual clauses in Bantu, at least those in our dataset, have the following properties.

- 18a) Actual clauses have a distinctive morphology expounded by a dedicated morpheme, such as a vowel marked by tone or length, or a syllable like Kiswahili *-ka-*. See table 1.⁶
- b) The actual clause proposition denotes an event or state of affairs and is taken to be true by UTT.
- c) The actual clause proposition denotes an event that has taken place or a state of affairs that holds at or before the time of utterance by UTT.
- d) The actual clause proposition is a new contribution to the common ground.
- e) An actual clause is only licensed as a complement clause.

In what follows, we show how semantic restrictions signaled by ACT morphology predicts much of its distribution. In section 4 we abandon (18e) as we extend our account to the narrative usage of ACT morphology.

3.0 Actual clause interpretation in complement contexts

We are proposing is that the use of an actual clause as a complement necessarily treats the complement clause as an assertion which entails that the speaker is not only committed to the truth of the proposition in the assertion, but that the speaker presents the proposition as new information added to the common ground. What we have to say in this section depends on these claims.

Recall that we mentioned that actual clauses cannot be complements to just any predicate that takes a complement clause. A striking fact is that actual clauses are infelicitous as complements to factive predicates, and we believe our hypothesis that actual clauses function as assertions derives this pattern.

In a paper on the selection of clausal types, Kiparsky & Kiparsky (1970) distinguish between factive and non-factive complements. A complement is said to be factive if it expresses a proposition taken to be true by UTT and the reported propositional attitude holder (the subject of the matrix verb), although there is more to say that we will get to later. The propositional attitude holder's commitment to the truth of the complement proposition and that of UTT are presuppositions preserved under negation. Non-factive complements have no such presuppositions. In (19a) the use of the Lubukusu factive verb translated as 'regret' presupposes

Commented [AN4]: Is it possible to say something more about complement clauses in Bantu languages? Maybe add a short introduction? Below it is said that it was mentioned that actual clauses cannot be predicates to just any predicate that takes a complement clause. Is it possible to indicate which types of complement clause predicates take actual clauses, or, if necessary, which don't? **We do this later.**

Commented [AN5]: Is it possible to give a starred example here (would 'know' be a good example of a factive verb?)? And can you explain a bit more why it isn't possible? Is it, because it would be redundant? But redundancy is not necessarily a problem in languages? Couldn't a clausal complement be able to 'harmonize' with the matrix verb? **This is where I have to elaborate our assumptions about factivity and the sorts of verbs that induce it. I may need to ask you for more examples in Lubukusu and Swahili.**

⁵ Unlike our other Kirundi examples, these matrix verbs are marked with DISJ, which suggests that the complement clause has vacated the VP. We are not sure why this marker appears here, but without it the sentences are still bad.

⁶ It is plausible to speculate that the /k/ may have been lost or inserted historically, but we do not investigate that possibility here.

that Wekesa married Mary and that Alice also accepts this as a fact, even if the verb is negated as in (20a). For the non-factive ‘believe’ (20b), Alice is committed to the truth of “Wekesa married Mary”, and UTT is not. As expected, negation removes Alice’s commitment to the truth of the complement clause proposition in (20b).

- 19a) 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
 Alice SM.c1-believe-FV c1-that Wekesa SM.c1-PST-marry-FV Maria
 ‘Alice believes that Wekesa married Mary’.
- 20a) Alice sé á-esóny-a bali Wekesa á-a-béy-a Maria tá
 Alice NEG SM.c1-regret-fv that Wekesa SM.c1-PST-marry-fv Mary not
 ‘Alice does not regret that Wekesa married Mary’
- b) Alice sé á-subil-a a-li Wekesa á-a-béy-a Maria ta.
 Alice NEG SM.c1-believe-fv c1-that Wekesa SM.c1-PST-marry-FV Maria not
 ‘Alice does not believe that Wekesa married Mary.’

Infinitive clauses are interpreted as denoting true propositions by both UTT and the propositional attitude holder when they occur as complements of factive verbs (21a,b), presuppositions that **do** not arise for non-factive predicates like that in (21c), as indicated by the contradictions imposed by the parentheticals in (21a,b) but not (21c).

- 21a) Mary was surprised to have won the game, (#but she did not win it)
 b) Mary was happy to have won the game, (#but she did not win it)
 c) Mary planned to win the game, (but she did not win it).

The Kiswahili example in (22a) shows that non-factive verbs such as ‘plan’, ‘try’, and ‘believe’ can take actual clause complements while the factive ones like ‘regret’ in (22b) cannot.

- 22a) Ken a-li-pang-a/ a-li-jarib-u/ ?a-li-amin-i
 Ken SM.c1-PST-plan-FV/ SM.c1-PST-try-FV/ SM.c1-PST-believe-FV
 a-li-tak-a a-ka-end-a kwenye sherehe
 /?SM.c1-PST-want-FV SM.c1-ACT-go-FV to ceremony
 Ken planned/tried/believed/wanted to go to the ceremony (and he did go). [Kiswahili]
- b) *Juma a-li-sikitik-a Peter a-ka-mu-oa Marya
 Juma SM.c1-PST-regret-FV Peter SM.c1-ACT-OM.c1-marry
 Mary
 Juma regretted that/and Peter married Mary. [Kiswahili]

The ACT complement is also not possible for the factive interpretation when a verb allows both factive and non-factive readings.

Commented [AN6]: Again, I find the difference in construction disturbing. In (22) the subject of the matrix clause is identical to the subject of the complement clause. This is not the case in (23). Due to the constructional difference, I find it hard to judge the unacceptability of an actual clause solely on the type of verb in the matrix clause. maybe construction type also plays a role? Using the same type of construction would make the argument stronger, I think. We will need additional examples here. To respond to the criticism, we need to see if any of these verbs can take a non-infinitival clausal complement, and if so, whether the subordinate clause subject can differ from the matrix clause one. I think we have this for “want”, tak-, somewhere, but I am not sure about the others. If they can only take subject control infinitives we should say so. I am not so sure that this objection needs to be addressed. It is not clear to me what the counterargument is.

- 23) Juma a-li-kubal-i Peter a-ka-mu-oa Marya
 Juma SM.c1-PST-agree-FV Peter SM.c1-ACT-OM.c1-marry Mary
 Juma agreed *that/and Peter married Mary
 Juma agreed for Peter to marry Mary, and he (Peter) did marry Mary. [Kiswahili]

The Kiswahili verb *kubal-* in (23b) can be taken to be factive if it describes a situation where “that Peter married Mary” is already accepted as true by UTT and A/I, in which case we might suppose that Juma has finally gotten around to the conclusion UTT and A/I take to be correct. In the factive scenario, ACT morphology in (23b) is * (indicated here by the * on “that”). However, the verb *-kubal-* can also be taken to indicate permission. That Juma agreed to allow Peter to Mary does not ensure that they were married, so the fact that they actually married subsequent to his agreement is what the actual can successfully assert.

Factive verbs incompatible with actual clauses in Lubukusu include *esony-* “regret”, *eyam-* “accept”, *funul-* “reveal”, *hukya-* “surprise”, *isindukh-* “surprise”, *layi-* “good”, *ri-* “fear” and *sangal-* “rejoice. A Lubukusu example that shows the same distinction in Kiswahili (23) is illustrated for Lubukusu in (24).

24) Please provide examples or tell me I have this wrong.

The Lubukusu verb *-fuklil*, allows a reading of common acceptance of a proposition (“agree”) but where it means “grant permission”, as in (24), it allows an actual clause complement. Lubukusu non-factive verbs that permit actual clause complements include *bol-* “say”, *deeb-* “ask”, *eni-* “want”, *ikonjelel-* “plead”, *kachul-* “tell”, *kan-* “want”, *khak-* “try”, *khalak-* “decide”, *ikomb-*, *lom-* “order/say”, *pang-* “plan/try”, *paar-* “suspect”, *-saal-* “pray”, *sab-* “ask”, and *yokel-* “yell”.⁷

We acknowledge that our account of factivity is less subtle than more recent approaches that show that certain verbs can be non-factive in certain contexts without alternation of meaning of the verb, as illustrated in (25). [If this prediction comes out right for Lubukusu, then I would like to include the Lubukusu examples. Otherwise I won’t elaborate with Bantu examples and leave a more careful exploration for later research. Or perhaps I will just leave it with the comments in footnotes 7 and 8 and drop this paragraph].

- 25a) Wekesa finally heard that Nafula was in town (#but she wasn’t).
 b) Like everyone else, Wekesa heard that Nafula was in town (but she wasn’t).

⁷ There are some verbs that are non-factive and still don’t take actual, or else require additional arguments when they do. For example, *kanakan-*, which we have translated as “think” can only take an actual clause complement if it has an applicative marker and *lak-* “promise” requires a direct object to intervene. We are not sure about what other conditions might hold in those cases. It is not always easy to determine the correct translation. Other cases like, *uk-* “suspect” and *kany-* “warn” can be factive in certain situations, e.g., we know that Max is coming, but we haven’t warned Mary yet, or we have to keep her from suspecting what we know to be the truth. However, we are not sure whether these examples are better when factivity is controlled for. The cause-effect readings may play a role. We expect to explore these matters further.

Commented [AN7]: I find it a bit odd to separate the final -i from the verb. Loans from Arabic are usually not split in root and final vowel. It’s especially odd since the default final vowel -a is not separated from the verb root. There is nothing at stake here, so we can just change the gloss unless you have an issue with the change.

On one reading of *heard*, Wekesa is the last to hear what everyone else already knows, which is a factive interpretation. This reading is easier to force if the adverb *finally* precedes *heard* as in (25a). It is easy to get the non-factive reading in (25b). Suppose there is a false rumor going around town and it finally reaches Wekesa. We have not had the opportunity to explore these subtleties crosslinguistically, but our prediction would be that if a verb takes an actual complement, then it is interpreted as non-factive in the context where it is used. We hope to explore these questions in future research.

Our claim that actual clauses constitute an assertion by UTT predicts this distinction between factive and non-factive verbs. A factive clause complement expresses a proposition that the UTT takes as true, but also one that UTT assumes that the A/I also takes as true. There is no point to assert something that is not at issue as if it is new information; it is already mutually believed. Thus, factive predicates are predicted not to take actual clause complements. The incompatibility of ACT with factive verb complements shows that the predicate that provides the context for the actual clause effect must be taken into account.⁸ Any verb that does not indicate that the speaker presupposed the truth of the complement allows for the subordinate clause assertion that ACT provides. Thus epistemic verbs, certain verbs of saying, verbs of desire or anticipation and so forth all allow ACT complements, and perhaps unsurprisingly, almost all of these verbs also allow subjunctive complements (in all the languages we have investigated) because subjunctive complements are inherently irrealis.

To summarize this section, we have argued that complement actual clauses function as assertions and as evidence we have demonstrated that factive predicates cannot have actual clause complements. We take UTT's goal in making an assertion is to present the A/I with new information that UTT expects A/I to take as true. If UTT uses a factive predicate, then the truth of the factive complement is presupposed by UTT to be already accepted as true by A/I. Thus using ACT as a subordinate assertion is incompatible with factive complementation. If the actual clause is a form of assertion, then it would appear to explain why it is not normally used for independent declarative clauses, which serve the same purpose but have full tense information.

4. Actual morphology in non-complement contexts

We have noted that there seems to be a causal relation between the matrix verb clause and the complement clause, such that the truth of the complement clause seems to come about by virtue of the act of saying/believing/wanting etc., expressed by the matrix clause. Drawing on a part of an idea suggested by Leonard (1980), we will say that actual clauses are presented

⁸ A reviewer adds the following "Though it is the received wisdom that factive predicates require a presupposition of truth, there is some work that questions this idea. Factive verbs can sometimes be used even when the complement clause is the main point of the assertion:

ia. Where was Harriet yesterday?

b. Henry discovered that she had a job interview at Princeton. (Simons, 2007, 1035)

Thus, we can sometimes use a factive verb to assert the embedded proposition. This suggests that the line between factive and non-factive verbs is blurry, and, with respect to the authors' proposal, it suggests that, in the right discourse environments, actual clauses should be possible under factive verbs." We have not had the opportunity to test this prediction, but we hope to pursue the matter in future work.

by the speaker as true because some contingency, has been met. The “contingent clause antecedent” (our term) in the environment of complementation is the matrix clause, which, by virtue of being asserted true by the speaker, has the result of making the complement clause true. Actual clause morphology is what signals not only that the complement clause is true, but why it is true, that is, the contingency for making it true has been met.

This way of putting things uses a small part of Leonard’s (1980) theory of the narrative tense in Kiswahili, which he took to signal that the event described by a Kiswahili clause with *ka* on the verb was to “question the event”. He used this description to cover three different cases. One case has to do with a rhetorical use where the proposition is taken to be true, but the appropriateness or surprise that the event/proposition is true is at stake. Without accounting for the rhetorical effect, we set this case aside because it does not challenge our assumption that the use of actual expresses an assertion (though there are other matters at stake to which we return). Another notion Leonard groups under questioning the event is to question whether the event is in fact true. This second notion is contradictory to ours, and so we will endeavor to reinterpret the rather slim evidence Leonard has for it later in this section. However, we would like to enlarge on the third notion Leonard groups under “questioning the event”, which is the idea that the event is contingent on some other proposition. What he does not note is that the contingency in question is taken to be met any time the narrative marker is used, so, in effect, the event is not questioned, but asserted to be true because its contingent antecedent proposition (our term) is accepted as true. This third notion is introduced by Leonard to account for the narrative use of *ka* whereby he takes meeting contingency to derive the consecutive effect in narrative as a consequence. Our revision of his idea follows his reasoning in this respect.

Viewed through our elaboration of Leonard’s idea, the narrative use of *ka* treats the *ka*-marked proposition as the consequence of its contingent antecedent. Thus, after a scene-setting clause introduces a tense, each following *ka* clause is a consequence of the last clause, which can be used to set up a sequence of events in a narrative. This is illustrated for Kiswahili, Ekegusii and Kirundi in (26).

- 26a) Baada ya wa-naume ku-lim-a shamba, wa-nawake wa-li-pand-a mi-mea,
 After AM c2-man c15-plough-fv 9field c2-woman SM2-PST-plant-fv c4-plant
 wa-ka-nyunyizi-a mi-che, wa-ka-kusany-a ma-zao, kisha wa-naume
 c2-ACT-water-fv c4-seedling SM2-ACT-collect-fv c6-crop then c2-man
 wa-ka-ingiz-a ndani ma-vuno.
 SM2-ACT-take-fv inside c6-harvest
 ‘After the men plowed the field, the women planted the crops, watered the seedlings,
 staked the mature plants, and then the men brought in the harvest’. [Kiswahili]
- b) Nyuma y-aba-sach-a ko-rem-a o-mogond-o, aba-kung-u ba-ga-simek-a e-bi-mer-i,
 ba-ka-bi-imorer-a amache, ba-ga-sangerer-ia rigesa, erio a-ba-sach-a ba-ka-ret-a rigesa
 [Ekegusii]
- c) Abagabo ba-mar-ye ku-rim-a, abagore ba-ra-ter-ye ibiterwa,
 Men SM.c1-finish-FV INF-cultivate-FV women SM.c1-ACT-plant-FV crops

ba-ra-vomer-a imbuto, ba-ra-egerany-a ibiterwa vyeze,
 SM.c1-ACT-water-FV seedlings, SM.c1-ACT-collect-FV plants mature
 hanyuma abagabo ba-ra-zan-a ivyimbura.
 then men SM.c1-ACT-FV the harvest [Kirundi]

[Shouldn't the gloss say SM.c2?]

In Kiswahili, the clause following the adjunct clause is the one that sets the tense. The adjunct clause itself has an infinitive verb. The rest of the clauses have the narrative/actual morphology. This is also true for Lubukusu. All the Bantu languages in our sample show affinity for narrative/actual marking as shown in (27), all with the translation in (27a).⁹

- 27a) Na-ech-a, na-a-bon-a na-a-kuur-a [Lubukusu]
 SM.c1.PST-come-FV, SM.c1-ACT-see-FV, SM.c1-ACT-conquer-FV
 'I came, I saw, I conquered.'
- b) Ni-li-kuj-a, ni-ka-on-a, ni-ka-shind-a [Kiswahili]
 SM.c1-PST-come-FV, SM.c1-ACT-see-FV, SM.c1-ACT-conquer-FV
- c) In-ga-ch-a, in-ka-ror-a, in-ka-bu-a [Ekegusii]
 SM.c1-PST-come-FV, SM.c1-ACT-see-FV, SM.c1-ACT-conquer-FV
- d) Na-ech-a, na-a-bon-a na-a-kuur-a [Lubukusu]
 SM.c1.PST-come-FV, SM.c1-ACT-see-FV, SM.c1-ACT-conquer-FV
- e) N-á-ra-z-ye, n-ra-bon-a, n-ra-tsind-a [Kirundi]
 SM.c1-PST-ACT-come-FV, SM.c1-ACT-see-FV, SM.c1-ACT-conquer-FV

[Shouldn't the gloss contain .Ist?]

4.1 Other accounts

There are at least two distinct accounts of narrative constructions that will serve to distinguish what we are proposing from what has previously been said.

Our account notably differs from Leonard (1980) in a number of respects. In particular, Leonard's second notion of questioning the event is directly incompatible with our theory. Specifically, he proposes that actual morphology (Kiswahili *ka* in his paper) signals that the truth of the actual clause proposition is in doubt. However, we think his defense of this view is based on a misinterpretation of a rhetorical use.

Leonard defends his view by presenting the following passage drawn from an address by a leading historical figure, Julius Nyerere, here with Leonard's gloss and translation.

- 28) Maskini wanaweza kuwa na roho za kibepari --- wanyonyaji wa binadamu
 wenzake.
 'Poor men can have the souls of capitalists --- parasites on their fellow men.'

⁹ These examples are inspired by Dahl (1985). He discusses what he calls 'narrative discourse' in several language families including the Niger Congo phylum where Bantu is a member. He uses one of the famous Julius Caesar's expressions which we also use to illustrate the narrative use.

Vile vile, Tajiri anaweza aKAwa na roho ya Ujamaa
 Same manner rich he-present-can be-KA-be with spirit of socialism
 Anaweza aKAthamini mali yake kwa sababu tu inaweza
 he-present-can he-KA-value wealth his for reason only it-present-can
 kutumiwa kuwasaidia binadamu wenzake
 to-be-use-ps to-them-help human companions-his
 Nimesema kuwa Tajiri anaweza aKAwa mpenda Ujamaa
 I-prfctv-say to-be rich he-present he-ka-be adherent socialism
 Lakini kumpata tajiri mpenda Ujamaa ni shida sana. Kwa kweli utajiri na Ujamaa
 hupingana
 ‘But finding a rich man who loves socialism is quite unlikely. In truth wealth and
 socialism do not get along.’

Leonard renders the whole passage as follows:

‘Poor men can have the souls of capitalists – parasites on their fellow men. Likewise, a rich man can value his wealth only because it can be used to help his fellow man...Likewise, a rich man can have a socialist spirit: He can value his wealth only because it can be used to help his fellow man...I have said that a rich man can be one who embraces socialism. But finding a rich man who loves socialism is quite unlikely. In truth wealth and socialism do not get along.’

Nyerere is trying to show, with a certain amount of irony, that socialism is not favored by the rich. The poor, in some circumstances, may have a tendency to think in capitalist terms, that is, to act only for their own benefit, the rich never think outside their own interest. Leonard takes this passage to show that the propositions in the actual/narrative marked clauses are so marked because they are questioned, and so not taken to be true. However, we interpret Nyerere’s use of the actual/narrative here to be crucial to the rhetorical form of his argument, which is a *reductio ad absurdum*, i.e., one starts by accepting premises that one wants to refute, and then one shows that accepting those premises leads to false conclusions. We might argue that by accepting false premises as if they were true (using *ka*) we end up in an unreal world where rich men favor socialism. He then says that in fact there aren’t rich men who hold that view. If he used subjunctive *e* in these environments Nyerere would only be positing a world where “rich men favor socialism” might be true, but that does not lead to the false conclusion if it turns out there are no such men, since the subjunctive *e* clausal marking only asserts that there might or might not be such men which is why he concludes that wealth and socialism do not get along.

Under our interpretation of this passage, the speaker is only committed to the truth of the *ka* propositions as a rhetorical tool where the subjunctive would not serve as well. We conclude that *ka* does not inherently signal the questioning of the event, as in Leonard’s theory (but see section 4.2).

Another prominent account of Kiswahili narrative uses is to treat it as an instance of a more general phenomenon called “clause-chaining”. Hopper (1979) proposes that the *ka* morphology in Kiswahili is an example of a morpheme that signals clause-chaining (see also Haspelmath, 1995). On this description, languages with a narrative marker clause-chain to the

right of the tensed (“nuclear”) clause, where tense is on only the first clause. All the subsequent verbs have only the narrative marker in place of tense but are semantically indexed to the sequence that starts after the tense reference point of the initial “nuclear” clause. Often, no conjunction morpheme is used. All of the clauses except the nuclear clause have a “dependent” or “medial”¹⁰ marking which is what we are identifying as actual marking in the languages of our sample. Descriptively, we do not object to this characterization.¹¹

However, Hopper considers the function of narrative morphemes in the so-called medial clauses to be a means of foregrounding a clause and backgrounding those clauses it is associated with, a line of analysis with a long pedigree (see also Longacre, 1985/2007, Dooley, 2010, Schröder, 2021, a.o.). Whether or not this approach is viable for other languages, for the Bantu languages in our limited sample (listed in Table 1), this approach does not explain the link between the narrative use and the interpretation of the ACT marking in complement clause contexts. Presumably, the claim would have to be that the complement is treated as foregrounded and the matrix clause is therefore backgrounded, but even if there were a clear test for backgrounded or foregrounded status, the causal link between the matrix clause event and the complement event would not be accounted for. Nothing in the foreground/background account predicts cause-and-effect interpretations nor does it directly lead to the possibility of consecutive interpretations. Moreover, it is not clear what it means for medial *ka*-clauses in a sequence to be backgrounded with respect to subsequent *ka*-clauses in the chain. While the Bantu markers discussed here may be a subcase of clause-chaining phenomena, the foregrounding/backgrounding approach is insufficiently specific to link the range of uses that actual clause morphology has in our Bantu sample.

4.2 Some unexplained cases

¹⁰ The term “medial” was introduced when it was thought that clause-chaining languages were always pre-nuclear. Since it is considered (e.g., Haspelmath, 1995) that post-nuclear cases like Kiswahili are also clause-chaining, the term medial, used when the chaining sequence preceded the nucleus, is no longer appropriate.

¹¹ Our interpretation of sequence closely follows the literature on other Bantu clause-chaining descriptions that may or may not show the actual clause complement effect (we have not checked). In southern Bantu languages (Nguni and Sotho-Tswana groups), the narrative is marked with *-a-* in the prefix position which also takes other TAM markers (Posthumus 1991). Khoali (1991) calls it the participial narrative past. It describes sequential or consecutive events. Like the actual, it appears to be tenseless as it depends on the matrix tense for time reference. Doke & Mofokeng (1952) call it the past subjunctive. Unlike the remote past, which is marked by a long vowel, the narrative in these languages has a short vowel. Apart from vowel length, there are also complex tonal variations based on the underlying tone of the verb root and the number of syllables for the verb hosting the tense (Letšeng 1995). [Do we have tones for this sentence?](#)

- i. Ke-fihl-ile hae ka-besa Ka-fiela, ka-pheha
SMC1-arrive-PERF home SMC1.NP-light-fire SMC1.NP-sweep SMC1.NP-cook
'I arrived home, made the fire, swept, and cooked' (Riedel et al 2019:5) (**Sotho**)

In some languages, Sotho being one, the SM of the narrative is morphologically different compared to other indicative tenses (Dahl 1985). The narrative can be negated and when this happens, the negative form used is closer to that used in subordinate clauses. We did not test for this characteristic in our sample languages and so it remains a matter for future research.

Since we treat actual clauses as marking an assertion, we would predict that they would not be used in matrix clauses, not only because matrix clauses that are assertions would not need the marking (it would be redundant), but also because we would not expect a matrix ACT-marked clause to occur where it is not in relation to a contingent antecedent clause. Although the contexts where counterexamples of either sort occur seem always to have some form of rhetorical effect, we don't have explanations for these cases. We point them out so that future researchers can consider whether these counterexamples could be handled by a better version of this theory or by some different, better theory.

Leonard (1980) points out a class of cases where ACT can mark matrix clause pointed involves expressions of surprise or incredulity, as in the Kiswahili example he provides below.

29) Two thieves have robbed a man. In the course of the robbery, one kills a policeman.

The accomplice says to the killer:

Wewe mjinga sana Kwa sababu gani uKAmwua yule askari?
 For reason what you-KA-him-kill that policemen
 You're a fool! Why should you have killed that policeman?

This example, and other similar ones presented by Leonard, presume that the events the *ka*-clause describes have occurred, but have the flavor of "what the hell did you kill that policeman for?" (Leonard's description). These are the cases that he describes as "questioning the event" because the inappropriateness of the event described is remarked upon, even though there is no question that the event has taken place. Our best guess for this usage within our approach is that the surprise consists in the absence of an appropriate contingent antecedent. The speaker treats the event described in the *ka*-clause as having taken place and the *ka* indicates there ought to have been a cause, a cause that the speaker cannot fathom.

Another Kiswahili case pointed out by Leonard, one that is harder for us to talk our way around, concerns a dialog from a play wherein a woman has caught her husband seducing another woman and as part of an awkward dialog, She says (as rendered by Leonard).

30) ingalikua bora uKAngiache
 it-nagali-be (sic) better you-KA-me-leave

Leonard remarks that the wife "is making what amounts to a prediction about what her husband will do and treats it as a polite command (to her husband). This she follows with a polite command using the subjunctive *e*. However, one might also consider (xx) as a necessary consequence of the unspoken situation, i.e., because he has cheated on her, he faces an inevitable (in her mind) consequence, namely, he must leave. On this suggested interpretation, ACT morphology is used because it is licensed by an implicit contingent antecedent, with the necessity of his leaving as a consequence. However, this seems a stretch.

A Lubukusu example pointed out by SS&B (2020) also remains unexplained (and was also unexplained in their paper). Such examples are also possible in Ekegusii.

31a) Wafula a-a-nyw-a ka-ma-beele ba-ba-ana ba-a-lil-a [**Lubukusu**]

Wafula SM.c1-ACT-FV 6-6-milk 2-2-child SM2-ACT-cry-FV
Wafula drank milk, so the children cried.

b) Wafula a-ka-nyw-a amabeere ab-ana ba-ka-rer-a [Ekegusii]

While one of the clauses might be the contingent antecedent for the other, that would still leave one clause without a contingent antecedent. We do not know why these are possible.

None of the examples in this section follows from a principled account of clause-chaining or from Leonard's theory, which conflates three notions of "questioning the event" that bear no intrinsic relation to one another. Unfortunately, our theory does not do better for these cases.¹²

4.3 Summary of section 4

We summarize how the properties of the morphologically marked narrative use in Bantu listed in (32) align with our account.

- 32a) The narrative is marked through a tense neutral morpheme in the TAM slot.
Sometimes the marking is through tonal melody or zero morpheme.¹³
- b) Narrative clauses typically occur in a sequence following an initial tense marked verb that sets the starting point in time before the narrative-marked clause events.
- c) The linear order of dependent clauses determines the temporal sequence of events.
- d) A narrative clause cannot initiate a narrative, and is in that sense, always dependent.
- e) Clause chains with narrative tense do not require that the subject of each narrative clause be the same as the one before it.

¹² In Kiswahili and Lubukusu what looks like actual morphology can be used in a matrix clause with the implication that the event described has already happened or has just happened (or at least this is our understanding of the facts in Lubukusu and Kiswahili). Consider the following examples simply translated as "Wekesa has gone" but with the implication as noted (and with the suggested translation proposed by a Kirundi consultant, though we have not yet extended our account to Kirundi)

- i. Wekesa a-ka-sha-end-a (Kiswahili)
Wekesa SMC1-ACT?-PRF-go-FV
- ii. Wekesa a-a-ch-il-e (Lubukusu)
Wekesa SMC1-PRF-go-PST-FV
- iii. Wekesa aragiye. (Kirundi)
Wekesa a-ra-gi-ye
Wekesa SMC1-ACT-go-FV
Wekesa has just gone (has just left, just now)
- iv. Wekesa ageye (Kikuria)
Wekesa a-ge-y-e
Wekesa SMC1-ACT-go-PP
- v. Wekesa a-chi-phi-ya (Kidigo)
Wekesa SMC1-ACT-go-FV

We suspect that the "just now already" reading depends on an implicit contingent assertion that he left, but we have not investigated the phenomenon sufficiently to offer a concrete suggestion.

¹³ There is sometimes an additional preverbal morpheme derived from the conjunction 'and/then' (as in Luganda).]

We have identified the morpheme described in (32a) as ACT. The properties in (32b,c) are consistent with our notion of dependency of the ACT clause on a contingent antecedent. We predict (32d) based on the need for a contingent antecedent and the redundancy of marking an assertion with ACT, but as pointed out in 4.2, this leaves some apparent counterexamples unexplained. Property (32e) appears to be a consequence of the fact that ACT-marked clauses do not behave as subjectless infinitives, and so nothing (such as control) requires that all the subjects in a chain should be identical.

The link we are proposing between the complement and narrative uses of ACT morphology is expected in our theory, as in both cases, the *ka* clause is presented as true as a result of its contingent antecedent being true. In both contexts there can be a sequential reading (although sequence is not crucial, see Leonard, 1980:xx.). The cause-and-effect interpretation that we see in complement contexts thus bears close resemblance to the narrative use, where each clause in the chain describes an event or situation that temporally precedes the one that follows it.

We acknowledge, however, that our account does not explain why actual clause propositions cannot denote an event or state of affairs that is not realized at the time of utterance. In discussions of narrative markers, it is usually just noted that they are typically used in narratives of past events (e.g., Nurse, 2008), but this does not seem to be a sufficient explanation, especially in the actual clause complement context. Nonetheless, the fact that the narrative distribution of the ACT morpheme and the complement distribution of the ACT morpheme share the same restriction supports our unified treatment.

5.0 Typology

In languages that have both the clause-chaining use and the actual clause complement effect, one can ask whether one usage is in some sense primary and the other secondary, though of course the answer will depend on what one takes to be primary or secondary. The question can presumably be answered in typological, diachronic or acquisitional terms.¹⁴ To take the last first, one may ask if the interpretation signaled by ACT morphology is easier to acquire in one context as opposed to the other. If it is easier to acquire the contingent antecedent condition from narrative contexts, then what a child knows about ACT from narratives can be generalized to complement contexts, for example. Historically, it might be determined that the complement usage arises only after a language has a narrative usage. Typologically, it could be that no language has a synchronic actual complement effect without having a narrative usage as well. These proposals are not mutually exclusive and may even reinforce one another. For example, if what ACT signals is not (easily) learnable from complement contexts, it must be learned from narrative contexts and then can potentially be generalized to complement contexts (if the language permits this morphology in its complement clauses at all). This would support a claim

¹⁴ To say that the narrative usage is primary on statistical terms would simply amount to calculating from a fair sample of corpora how frequently it is used in one context as opposed to the other. Without more contextual assumptions, this fact leads nowhere. It could be used, however, to support an acquisition argument, if the more frequent usage is the one that is more easily learned, for example. The only acquisition study we are aware of addressing the narrative tense examines the narrative tense in Sotho (Riedel, Sarvasy, and Demuth, 2019), which they liken to Kiswahili, but we have not investigated whether or not there is a complement actual clause effect in Sotho.

that no synchronic language could have the actual complement clause effect without having the narrative usage. An historical account could potentially support how the complement context usage could have arisen but would not necessarily predict that the narrative usage could disappear and leave a language with only the actual clause complement effect.

From what our research shows so far, the strongest statement, that a language can only synchronically have the actual complement effect if it has the narrative usage, seems to be supported. For every language in which we have found the actual clause complement effect, the same morphology is also used for clause-chaining. It is possible that some languages may have clause-chaining marked by a form that replaces tense, but without extending the use of that form to complement clauses, though we have no examples to offer at this time. More research will be necessary to determine what the best generalizations are.

However, it could turn out that whatever the typological generalization is, it might have broader relevance not necessarily tied to overt tense-replacing morphology. Many clause-chaining languages have switch reference markers. Switch-reference morphology on a verb typically determines whether or not a given dependent clause in the chain has the same subject as an adjacent clause or has a different one. In languages where switch reference is the only morphology that indicates clause-chaining, it could be that switch reference in a complement clause (which has been taken to be typologically rare) could also signal an embedded assertion effect. Many questions remain open.

6.0 Conclusion

We have argued that the morphology we call ACT and its counterparts in other Bantu languages where it is called “narrative” or “consecutive” signals that the speaker is committed to the ACT-clause being true as a consequence of its contingent antecedent being true. We have explored the relationship between the actuality reading in ACT clause complements and the use of ACT in narrative on this basis. The claim that actual clauses are assertions relates both of its uses to the moment of speech, which entails that the speaker presents as true a proposition that is not presupposed to be true. By syntactic tests, we showed that ACT clause can indeed be complements, even though they function as assertions. The complement clause usage is thus predicted to be incompatible in factive contexts, which we showed to be the case. We speculate that the complement clause usage is adapted from the narrative usage, which would account for the same morphology appearing in both contexts. Insofar as not every language with dedicated narrative/actual morphology also allows clauses of that type to be complement clauses, the implication is only one way, i.e., if ACT is a complement clause type, then the language uses ACT for narrative clause-chaining. We then expect that there will be languages with a special clause type for clause-chaining that may not use the same morphology for complement clauses. However, our empirical research is ongoing.

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