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The typology of actual clauses in Eastern Bantu

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Abstract

This article reports on the existence of actual clause morphology and interpretation in selected Bantu languages. Essentially, we treat the actual clause as an embedded assertion whereby the utterer is committed not only to the truth of the proposition described by the actual clause: It must be the case that the event in the proposition cannot be unrealized (or describe a future state) at the time of the utterance. The Bantu languages in our sample mark the actual clause by a verbal prefix in a typical tense position on the lower verb. This prefix occurs as a single vowel or as a consonant/vowel combination. When the actual clause is a syntactic complement, it co-occurs with verbs that may be incompatible with indicative clauses. The clause is also semantically distinct from other clause types such as the infinitive and the subjunctive. Our analysis of actual clauses as assertions explains why they are not complements of factive verbs. We argue that the source of the speaker's commitment to truth arises in part 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" which is taken to be a precondition for the actual clause assertion. Our approach generalizes to explain other non-complement uses of actual/narrative clause types, typically described as "narrative" tense in Bantu, which bears the exact same morphology.

Keywords

actuality entailment, Bantu, clausal complementation, embedded assertion, narrative tense

Résumé

Cet article traite de l'existence de la morphologie des clauses réelles et de leur interprétation dans certaines langues bantoues. Fondamentalement, nous considérons la clause réelle comme une assertion enchâssée par laquelle l'énonciateur s'engage à la fois sur la vériconditionnalité du contenu propositionnel, et sur le fait que l'événement ne peut pas ne pas être réalisé (la clause réelle ne peut dénoter un état futur) au moment de l'énonciation. Les langues bantoues de notre échantillon marquent la clause réelle par un préfixe verbal dans la position typique de la marque de temps portée par le verbe de la subordonnée. Ce préfixe se présente sous la forme d'une simple voyelle ou d'une combinaison consonne-voyelle. Lorsque la clause en question est un complément syntaxique, elle coexiste avec des verbes qui peuvent être incompatibles avec des clauses indicatives. La clause est également sémantiquement distincte des autres types de clause tels que l'infinitif et le subjonctif. Notre analyse des clauses réelles en tant qu'assertions explique pourquoi elles ne sont jamais des

compléments de verbes factifs. Nous soutenons que la source de l'engagement du locuteur envers la véridonditionnalité de la proposition provient en partie de la façon dont les clauses réelles sont légitimées par les clauses auxquelles elles sont subordonnées. En d'autres termes, nous proposons que les clauses réelles sont légitimées par une « clause antécédente contingente » qui est considérée comme une condition préalable à l'assertion de la clause réelle. Notre approche se généralise pour expliquer d'autres utilisations non complémentaires de types de clauses réelles/narratives, typiquement décrites comme des temps « narratifs » en bantou, qui portent exactement la même morphologie.

MOTS CLÉS
assertion enchâssée, bantou, implication d'actualité, proposition complétive, temps narratif

1. INTRODUCTION

Safir *et al.* (2020) demonstrate the existence of the so-called "actual clause" in Lubukusu (JE31c). 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 Safir *et al.* (2020), 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 paper we take a different tack, treating actual clauses as embedded assertions whereby 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 in the embedded clause, 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-OM.C1-tell-FV C1.Mary SM.C1-ACT-OM.C1-eat C9.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). Safir *et al.* (2020) treated the speaker's commitment to the truth of the complement clause proposition as parallel to the actuality entailment effect in (2). In this paper, 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 which bear the exact same morphology.[1]

We will proceed as follows. In Section 2 we will review the distribution of the actual clause complement and describe the effects that actual clauses evidence. Section 3 analyzes the properties of actual clause complements 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 narratives. We introduce our contingent antecedent clause analysis, and we show that our account predicts that the actual clause complement effect follows from the same semantic function that actual 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. Identifying actual clauses as complements

The embedded clause in (3) is what we characterize as an 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 and 1985; Johnson 1979; Schröder 2013; Englebretson & Wambũi 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 4. 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 (JE42) and Kiswahili (G42), respectively.[2]

(4) a. *Obuchi* *a-ga-tem-el-a* *o-mw-ana* *a-**ka**-gend-a*
Obuchi SM.C1-PST-try-APPL-FV C1[3]-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).' [Ekegusii]

b. *Juma* *a-li-m-jarib-i-a* *m-toto* *a-**ka**-end-a*
Juma SM.C1-PST-OM.C1-try-APPL-FV C1-child SM.C1-ACT-go-FV
chou *ki-kuu*.
C7.institution C7-big
'Juma tried for the child to go to the university (and he did go).' [Kiswahili]

1. Speakers of Kiswahili and Rutooro report that in addition to the actuality effect, there is also an intuition that Aya has granted permission for Mary to eat the fish. While we do not exactly predict this additional implication, it is consistent with what we say about contingent antecedent clauses in Section 4.1.

2. Three points are of note with respect to our presentation of the data. Some examples have four lines, and in those cases the top line is a representation of the sentence without morpheme breakdown, though in most cases we present just three lines, consisting of morpheme breakdown, gloss and translation. We mark tone when we have that information. For a number of examples other than those that are Lubukusu (for which we have all the tones) and Rutooro (which lacks tone), we do not have complete information. Noun class markers are numbers preceded by lower case "C". Since all proper names are C1, we have omitted C1 in those cases to save space.

3. To save space and to remain consistent with Afranaph glossing, we do not label the first C1 affix "AUG" for augment, though the AUG label is typically the gloss within the Bantu literature.

There are various arguments to treat actual clauses as complement clauses (not adjuncts). First, actual clauses are tenseless and are dependent on the tense of the matrix clause for time reference. Second, actual complement clauses can be compatible with verbs that do not take indicative clauses as complements (Safir *et al.* 2020), but that do take subjunctive and/or infinitive complements. Notice that the applicative verbs in (4a) and (4b), which normally require two objects, have the actual clause as a complement that counts as one of the objects. In Kiswahili (4b), where the OM is generally agreed to be an agreement marker (e.g. Keach 1995), the presence of the OM does not affect the verb's argument structure, and so the actual clause remains a complement. Without the actual clause, the translation would be #'Juma/Obuchi tried for the child'.

Additional evidence that the actual clause is a complement is that it allows extraction, as illustrated for Lubukusu and Kiswahili in (5).

(5) a. *Y-á-b-a* *e-ng'eni* *níyo* *Wekesa*
SM.C9-PST-be-FV C9-fish COMP.C9 Wekesa
á-subila/é-nya/á-loma *Mary* *a-a-ly-a.*
SM.C1.PST-believe/want/say Mary 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 ndiye Wekesa
SM.C9-PST-be-FV C9.fish COMP.C1 Wekesa
a-li-amini/taka/sema Marya a-ka-m-l-a
SM.C1.PST-believe/want/say Mary SM.C1-ACT-OM.C1-eat-FV
'It was the fish that Wekesa believed/wanted/said Mary ACT-ate.' [Kiswahili]

The typical assumption is movement is only possible if the clause is a complement, and that adjuncts are islands for movement. Although there are probably certain kinds of low adjuncts without 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: 10), extraction from actual clause contexts does not fit Haspelmath's converb profile, whichmost typically lack an overt subject.

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 prejacent proposition in most instances (see also fn.1). 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, as distinguished from a reported speaker). 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 actual morphology. Examples for other languages in our sample (see Table 1) include just the actual clause version to save space, as in (9).

(6) a. *Wekesa á-ból-el-a o-mw-aana a-li Nafula*
Wekesa SM.C1.PST-tell-APPL-FV C1-C1-child C1-COMP Nafula
á-ly-á e-keki.
SM.C1.PST-eat-FV C9-cake
'Wekesa told the child that Nafula ate the cake.' [Lubukusu]

b. *Wekesa á-ból-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).' [Lubukusu]

(7) a. *Peter alimwambia mtoto kuwa Mary alikula keki.*
Peter a-li-mwamb-i-a mtoto kuwa Maria a-li-kul-a
Peter SM.C1.PST-tell-APPL-FV C1-child COMP Maria SM.C1.PST-eat-FV
keki
C9.cake
'Peter told the child that Mary ate the cake.' [Kiswahili]

b. *Aya a-li-mw-amb-ia Marya a-**ka**-m-la samaki.*
Aya SM.C1-PST-OM.C1-tell-FV Mary SM.C1-**ACT**-OM.C1-eat C9.fish
'Aya told Mary to eat fish (and she did eat fish).' [Kiswahili]

(8) a. *Petero yagambye nti Marya yalidde kechi.*
Petero a-a-gamb-ye nti Marya a-a-li-dde kechi
Peter SM.C1-PST-say-PFV COMP Mary SM.C1-PST-eat-PFV C9.cake
'Peter said that Mary ate the cake.' [Luganda]

b. *Petero yagambye Marya n'alya kechi.*
*Petero a-a-gamb-ye Marya n-a-**a**-ly-a kechi*
Peter SM.C1-PST-say-FV Mary DEP[4]-SM.C1-**ACT**-eat-FV C9.cake
'Peter said (and) Mary ate the cake.' [Luganda]

c. *Aya yagambye Mary n'alya ekyennanja.*
*Aya a-a-gamb-ye Marya n-a-**a**-ly-a e-kyennanja.*
Aya SM.C1-PST-tell-PFV Mary DEP-SM.C1-**ACT**-eat-FV C9-fish
'Aya told Mary to eat fish (and she did eat fish).' [Luganda]

(9) a. *Aya a-ka-mo-teb-ia Maria a-**ka**-ri-a enswe*
Aya SM.C1-PST-OM.C1-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-OM.C1-tell-FV Mary SM.C1-**ACT**-eat-FV C9.fish
'Aya told Mary to eat fish (and she did eat fish).' [Kidigo]

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 the (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 C1 subject marker, while the actual is marked

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

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 actual marker. The distinctive actual 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 distinctive.[5] The first six 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 data.[6]

Table 1. Actual morphology in relation to other tense markers

	Simple past	Today past	Recent past	Perfective	Actual	Subjunctive	Infinitive
Lubukusu JE31c	á-lya	a-li-ile	á-li-ile	á-a-lya	*a-a-lya*	a-lye	khu-lya
Kiswahili G42-45	a-li-kula	a-li-kula	a-li-kula	a-sha-kula	*a-ka-kula*	a-le	kula
Luganda JE15	y-a-lya	y-a-lidde	a-lidde	a-lidde	*n-a-lidde*	a-lye	ku-lya
Kidigo E73	w-a-rya	w-a-rya	w-a-rya	a-ka-rya	*a-chi-rya*	a-rye	ku-rya
Ekegusii JE42	a-ka-rya	na-rya	n-ari-et-e	o-ri-ir-e	*a-ka-rya*	a-ry-e	ko-rya
Kirundi JD62	**a-á-riye**/ a-á-ra-riye	a-a-riye	a-ra-riye	a-a-riye	*a-ra-rya*	a-rye	ku-rya
Kikuria JE43	n-a-reye	n-a-reye	na-rea-reye	a-a-reye	*a-ka-reye*	a-re	ko-rya
Rutooro JE12	a-ka-lya	a-li-ire	a-li-ire	a-li-ire	*a-lya*	a-lye	ku-lya
Kikamba E55-56	ni-wa-iye	n-u-iye	n-u-na-iye	n-u-iye	*a-iye*	a-ye	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, Kidigo, Kikamba, Lubukusu, and Kirundi examples in (10a-e), the follow-up negation in brackets is infelicitous because in the world of UTT, Wafula did go, and hence the truth cannot be negated. Similar results are also reported for Luganda by our consultants, but we do not have an example.

5. 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.

6. The /k/ may have been lost or inserted historically, but we do not investigate that possibility here.

(10) a. *Wekesa a-li-m-himiza Wafula a-**ka**-end-a*
Wekesa SM.C1-PST-OM.C1-urge Wafula SM.C1-ACT-go-FV
[**lakani ha-a-ku-end-a*].
but NEG-PST-C15-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-phiy-a*
Wekesa SM.C1.PST-OM.C1-urge-FV Wafula SM.C1-ACT-go-FV
[**ila ka-ya-phiy-a*].
[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-isuv-ie Zalo a-nyw-a yiia*
Juma SM.C1.PST-OM.C1-urge-PFV Zalo SM.C1.ACT-drink-FV milk
[**indi nda-a-nyw-a*].
[but NEG-SM.C1.PST-drink-FV]
'Juma urged Zalo to drink milk (and he did), [*but he did not drink].' [Kikamba]

d. *Wekesa á-subisy-a Wafula a-a-ch-a*
Wekesa SM.C1.PST-urge-FV Wafula SM.C1-ACT-go-FV
[**nekakhali sé-á-ch-a ta*].
but NEG-SM.C1.PST-go-FV NEG
'Wekesa urged Wafula to go (and he did) [*and he did not go].' [Lubukusu]

e. *Wekesa a-á-hanur-ye Wafula a-ra-gend-a*
Wekesa SM.C1-PST-urge-FV Wafula SM.C1-ACT-go-FV
[**ariko nti-a-á-gi-ye*].
[*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 as just presented 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, what sort of speech act is it? We return to this question in Section 3.[7]

As Safir *et al.* (2020: 190) 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.

(11) *Wekesa á-a-bólel-a Wafula khu-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 NEG)
'Wekesa told Wafula to go, but Wafula did not go.' [Lubukusu]

7. 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 Safir *et al.* 2020: 198, fn. 5). The morphology in (i) looks similar to actual morphology, but it marks habitual action which has happened before and still does (in English it could be translated as 'Wafula likes fish, and still does'). 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 is not necessarily borne out, but further inquiry is pending.

(12) *Wekesa á-a-bólel-a Wafula á-ch-e*
Wekesa SM.C1-PST-tell-FV Wafula SM.C1-go-SBJV
(*ne kakhali Wafula se á-a-ch-a tá*).
(and though Wafula NEG SM.C1-PST-go-FV NEG)
'Wekesa told Wafula that he may go, but Wafula did not go.' [Lubukusu]

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.

(13) a. *Wekesa á-a-nyál-a khu-khw-ombakh-a enju, ne kakhali*
Wekesa SM.PST-able-FV C15-C15-build-FV C9.house and though
se á-a-nyóol-a bu-bw-aangu tá.
NEG SM.C1-PST-find-FV C14-C14-chance NEG
'Wekesa was able to build the house, but he never got the chance.' [Lubukusu]

b. *Wekesa á-a-nyál-a o-ombakh-a enju, (*ne kakhali*
Wekesa SM-PST-able-FV SM.C1.ACT-build-FV[8] C9.house and though
se-á-a-nyóol-a bu-bw-aangu tá).
NEG-SM.C1-PST-find-FV C14-C14-chance NEG
'Wekesa managed to build the house (*but he never got the chance).' [Lubukusu]

Since the actual ensures that what Wekesa can do he has in fact done, the meaning of 'succeed' is essentially achieved.[9]

As Safir *et al.* (2020) have shown, UTT 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 Section 4.2). Because the actual clauses describe 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 is compatible with both infinitive and subjunctive, as shown for Lubukusu (14), Ekegusii (15) and Kiswahili (16).

(14) a. **Wafula á-khá-eny-e a-a-bey-a Maria.*
Wafula SM.C1-FUT-want-FV SM.C1-ACT-marry-FV Mary
intended: 'Wafula will want that he married Mary (and he did).' [Lubukusu]

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.' [Lubukusu]

c. *Wafula á-khá-eny-e a-bey-e Maria.*
Wafula SM.C1-FUT-want-FV SM.C1-marry-SBJV Mary
'Wafula will want that she may marry Mary.' [Lubukusu]

8. ACT is *-o-* and not *-a-* in this example because of an interaction with the initial vowel of the verb stem.
9. 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.

(15) a. **Obuchi n-a-g-ani-e a-ka-nywom-e Maria.*
Obuchi FOC-SM.C1-FUT-want-FV SM.C1-ACT-marry-FV Mary
intended: 'Obuchi will want that he married Mary (and he did).' [Ekegusii]

b. *Obuchi n-a-g-ani-e ko-nywom-a Maria.*
Obuchi FOC-SM.C1-FUT-want-FV C15-marry-FV Mary
'Obuchi will want to marry Mary.' [Ekegusii]

c. *Obuchi n-a-g-ani-e a-nywom-e Maria.*
Obuchi FOC-SM.C1-FUT-want-FV SM.C1-marry-SBJV Mary
'Obuchi will want that he may marry Mary.' [Ekegusii]

(16) a. **Wafula atataka akamwoa Maria.*
Wafula a-ta-tak-a a-ka-mw-o-a Maria
Wafula SM.C1-FUT-want-FV SM.C1-ACT-OM.C1-marry-FV Mary
intended: 'Wafula will want that he married Mary (and he did).' [Kiswahili]

b. *Wafula atataka kumwoa Maria.*
Wafula a-ta-tak-a ku-mw-o-a Maria
Wafula SM.C1-FUT-want-FV C15-OM.C1-marry-FV Mary
'Wafula will want to marry Mary.' [Kiswahili]

c. *Wafula atataka amwoe Maria.*
Wafula a-ta-tak-a a-mw-o-e Maria
Wafula SM.C1-FUT-want-FV SM.C1-OM.C1-marry-SBJV Mary
'Wafula will want that he may marry Mary.'[Kiswahili]

As Safir *et al.* (2020) point out for Lubukusu, verbs that take complements describing events that cannot take place cannot normally use the actual either, such as verbs meaning 'fail', 'prevent', or 'deny permission'. The verb *shindw-* is not quite as bad as the other Kiswahili verbs in (17a).

(17) a. **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 C9.ceremony
intended: 'Ken failed/deny permission/prevented (and) he went to the ceremony.' [Kiswahili]

b. **Ken á-khilw-a/á-lob-a/á-khingilil-a*
Ken SM.C1.PST-fail-FV/SM.C1-PST-deny-FV/SM.C1-PST-prevent-FV
a-a-ch-a mu-mu-lukha.
SM.C1-ACT-go-FV C18-C18-ceremony
'Ken failed/deny permission/prevented (and) he went to the ceremony.' [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-FV C18-ceremony
'Ken failed/deny permission/prevented (and) he went to the ceremony.' [Kirundi][10]

10. 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.

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

(18) a. Actual clauses have a distinctive morphology exponed by a dedicated morpheme, such as a vowel marked by tone or length, or a syllable like Kiswahili *-ka-*. See Table 1.
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 actual morphology predict much of its distribution. In Section 4, we abandon (18e), as we extend our account to the narrative usage of actual morphology.

3. Actual clause interpretation in complement contexts

We are proposing that the use of an actual clause as a complement necessarily treats the complement clause as an assertion, which entails that UTT is not only committed to the truth of the proposition in the assertion, but that UTT presents the proposition as new information to be added to the common ground.

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 that 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 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' (19b), 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). The factive clauses require the use of the non-agreeing *bali* complementizer.

(19) a. *Alice á-esóny-a* *bali* *Wekesa* *á-a-béy-a* *Maria.*
Alice SM.C1-regret-FV COMP Wekesa SM.C1-PST-marry-FV Maria
'Alice regrets that Wekesa married Mary.' [Lubukusu]
b. *Alice* *á-subil-a* *a-li* *Wekesa* *á-a-béy-a* *Maria.*
Alice SM.C1-believe-FV C1-COMP Wekesa SM.C1-PST-marry-FV Maria
'Alice believes that Wekesa married Mary.' [Lubukusu]

(20) a. *Alice* *sé* *á-esóny-a* *bali* *Wekesa* *á-a-béy-a*
Alice NEG SM.C1-regret-FV COMP Wekesa SM.C1-PST-marry-FV
Maria *tá.*
Mary NEG
'Alice does not regret that Wekesa married Mary.' [Lubukusu]

b. *Alice sé á-subil-a a-li Wekesa á-a-béy-a*
Alice NEG SM.C1-believe-FV C1-COMP Wekesa SM.C1-PST-marry-FV
Maria ta.
Maria NEG
'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).

(21) a. 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. The question marks in the morpheme breakdowns are indications of gradations in the judgments and not part of the gloss proper.

(22) a. *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 C9.ceremony
'Ken planned/tried/believed/wanted to go to the ceremony (and he did go).' [Kiswahili]
b. **Juma a-li-sikitik-a a-ka-mw-o-a Marya.*
Juma SM.C1-PST-regret-FV SM.C1-ACT-OM.C1-marry-FV Mary
intended: 'Juma regretted that/and married Mary.' [Kiswahili]

The actual complement is also not possible for the factive interpretation when a verb allows both factive and non-factive readings (23).

(23) *Juma a-li-kubali Peter a-ka-mw-o-a Marya.*
Juma SM.C1-PST-agree Peter SM.C1-ACT-OM.C1-marry-FV 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 *-kubali* in (23) can be taken to be factive if it describes a situation where 'that Peter married Mary' is already accepted as true by the UTT and the addressee, in which case we might suppose that Juma has finally gotten around to the conclusion that UTT and addressee take to be correct. In the factive scenario, actual morphology in (23) is not accepted (indicated here by the * on the first translation). However, the verb *-kubali* can also be taken to indicate permission. That Juma agreed for Peter to marry 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.

In Lubukusu, factive verbs that are incompatible with actual clauses include *esony-* 'regret'*, eyam-* 'accept'*, funul-* 'reveal', *hukya-* 'surprise', *isindukh-* 'surprise'*, ri-* 'fear', and *sangal-* 'rejoice'. A Lubukusu example using the verb *fukilil-* 'admit' shows that the same kind of distinction in Kiswahili (23) can also be illustrated for Lubukusu in (24).

(24) *Wekesa á-fukilil-a Peter a-a-bey-a Marya.*
Wekesa SM.C1.PST-accept-FV Peter SM.C1-ACT-marry-FV Mary
'Wekesa accepted for Peter to marry Mary (and he did).' [Lubukusu]

The Lubukusu verb *fukilil-* 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', *reeb-* 'ask', *eny-* 'want', *ikonjelel-* 'plead', *kachul-* 'tell', *kan-* 'want', *khak-* 'try', *khalak-* 'decide', *ikomb-* 'wish', *lom-* 'order/say', *pang-* 'plan/try', *paar-* 'suspect', *saal-* 'pray', *sab-* 'ask', and *yokel-* 'yell'.[11]

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 (rather by manipulation of context) (see, e.g., Anand & Hacquard 2014, and references cited there). We have not had the opportunity to explore these subtleties crosslinguistically, but it is predicted 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 UTT takes as true, but also one that UTT that the addressee also takes as true. There is no point for UTT to assert something as new information if UTT and the addressee already accept it as true and not at issue. Thus, factive predicates are predicted not to take actual clause complements. The incompatibility of actual morphology with factive verb complements shows that the predicate that provides the context for the actual clause interpretation must be taken into account.[12] Any verb that does not indicate that UTT presupposed the truth of the complement allows for the subordinate clause assertion that the actual morpheme provides. Thus, epistemic verbs, certain verbs of saying, verbs of desire or anticipation, and so forth all allow actual 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 to be to present the addressee with new information that UTT expects the addressee 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 the addressee. Thus using the actual clause as a subordinate assertion is incompatible with factive complementation.

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

11. 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-*, '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.

12. 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: consider this example from Simons (2007: 1035): *Where was Harriet yesterday? Henry discovered that she had a job interview at Princeton.* […] 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.

suggested by Leonard (1980), we will say that actual clauses are presented by the speaker (Leonard's speaker is our UTT) 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 by UTT 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 (25). 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.

(25) a. *Baada ya wa-naume ku-lim-a shamba, wa-nawake*
after AM.C9 C2-man C15-plough-FV C9.field C2-woman
wa-li-pand-a mi-mea, wa-ka-nyunyizi-a mi-che,
SM.C2-PST-plant-FV C4-plant C2-ACT-water-FV C4-seedling
*wa-**ka**-kusany-a ma-zao, kisha wa-naume wa-**ka**-ingiz-a*
SM.C2-ACT-collect-FV C6-crop then C2-man SM.C2-ACT-take-FV
ndani ma-vuno.
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-a-ba-sacha ko-rem-a o-mo-gondo, a-ba-kungu*
after AM.C9-C2-C2-man C15-plough-FV C C3-C3-field C2-C2-woman
*ba-ga-simek-a e-bi-meri, ba-**ka**-bi-imor-er-a a-ma-che,*
SM.C2-PST-plant-FV C8-C8-plant SM.C2-ACT-OM.C2-sprinkle-APPL-FV C6-C6-water
*ba-**ka**-sangerer-i-a ri-gesa, erio a-ba-sacha*
SM2-ACT-collect-CAUS-FV C5-plant then C2-C2-man
*ba-**ka**-ret-a ri-gesa.*
SM.C2-ACT-bring-FV C5-plant
'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'. [Ekegusii]

c. *A-ba-gabo ba-mar-ye ku-rim-a, a-ba-gore*
C2-C2-men SM.C1-finish-FV INF-cultivate-FV C2-C2-women
*ba-**ra**-ter-ye i-bi-terwa, ba-**ra**-vomer-a i-mbuto,*
SM.C2-ACT-plant-FV C8-C8-crops SM.C2-ACT-water-FV C9-seedlings
*ba-**ra**-egerany-a i-bi-terwa vyeze, hanyuma a-ba-gabo*
SM.C1-ACT-collect-FV C8-C8-plants C8.mature then C2-C2-man
*ba-**ra**-zan-a i-vy-imburwa.*
SM.C2-ACT-FV C8-C8-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' [Kirundi]

All the Bantu languages in our sample that have actual marking also use actual morphology for narratives, as shown in (26), all with the translation in (26a).[13]

(26) a. *Ná-ech-a, na-a-bon-a, na-a-kuur-a.*
SM.C1.PST-come-FV SM.C1-ACT-see-FV SM.C1-ACT-conquer-FV
'I came, I saw, I conquered.' [Lubukusu]

b. *Ni-li-kuj-a, ni-ka-on-a, ni-ka-shind-a.*
SM.C1-PST-come-FV SM.C1-ACT-see-FV SM.C1-ACT-conquer-FV
'I came, I saw, I conquered.' [Kiswahili]

c. *In-ga-ch-a, in-ka-ror-a, in-ka-bu-a.*
SM.C1-PST-come-FV SM.C1-ACT-see-FV SM.C1-ACT-conquer-FV
'I came, I saw, I conquered.' [Ekegusii]

d. *N-á-ra-z-ye, n-ra-bon-a, n-ra-tsind-a.*
SM.C1-PST-DISJ-come-FV SM.C1-ACT-see-FV SM.C1-ACT-conquer-FV
'I came, I saw, I conquered.' [Kirundi]

So far, we have only proposed that the actual morphology functions as a marker of an embedded assertion, but this does not suffice to connect the use of actual morphology in the complement clause to the use of actual morphology in narrative. In order to make this connection, we argue that both uses are licensed by dependency on a previous proposition in discourse. We will build our account

13. 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.

of actual morphology licensing by refining what we take from previous accounts, and so we briefly explore those accounts in the next section.

4.1 Other accounts

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

Our treatment of ACT morphology as marking an assertion differs notably 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.

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

Vile	*vile,*	*Tajiri*	*anaweza*	*a**ka**wa na*	*roho*	*ya*	*Ujamaa*	
same	manner	rich	he.present.can	be.KA.be	with.spirit	of	socialism	
Anaweza	*a**ka**thamini*	*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*	*a**ka**wa*	*mpenda*	*Ujamaa*		
I.PFV.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 people 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 people favor socialism' might be true, but that does not lead to the false conclusion if it turns out there are no such people, since the subjunctive *e* clausal marking only asserts that there might or might not be such people, 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"[14] marking, which is what we are identifying as actual marking in the languages of our sample. Descriptively, we do not object to this characterization.[15]

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; Dooley 2010; Schröder 2021, among others). 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

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),[16] but also because we would not expect a matrix actual marked clause to occur where it is not in relation to a contingent antecedent clause. Counterexamples of both sorts, namely, matrix assertions with actual morphology or actual morphology without an overt contingent antecedent clause, do occur, and when they do, they always have some form of rhetorical effect. We don't have

14. 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.

15. 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 (1957) 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). 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.

16. Jenneke van der Wal (personal communication) alerts us to Somali *baa*, as analyzed by Matić & Wedgwood (2013), which seems to be an assertion marker for matrix assertions. Notably, Matić & Wedgwood comment that it seems to be predominantly used as a discourse-organizing device, and so adds more to interpretation than a simple mark of assertion. We would expect an assertion marker in an indicative clause to be unexpected unless it adds to some other aspect of interpretation.

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 the actual morpheme can mark matrix clause expressions of surprise or incredulity, as in the Kiswahili example he provides below.

(28) Two thieves have robbed a man. In the course of the robbery, one kills a policeman. The accomplice says to the killer:

Wewe	*m-jinga*	*sana.*	*Kwa*	*sababu*	*gani*	*u-**ka**-mw-ua*	*yule*
you.SG	C1-fool	real	for	C9.reason	what	SM.2SG-NARR-OM.C1-kill	DEM

askari?

C1.policemen

'You're a fool! Why should you have killed that policeman?' (Leonard 1980: 217, gloss added/adapted)

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. As part of an awkward dialog, she says (as rendered by Leonard):

(29)

i-ngali-kua	*bora*	*u-**ka**-ni-ach-e*
EXPL-COND-be	better	SM.2SG-NARR-OM.2SG-leave-SBJV

'It would have been better if you left me.'

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)." However, one might also consider (29) 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 and the occurrence of subjunctive morphology is, to us, unexpected.

A Lubukusu example pointed out by Safir *et al.* (2020: 192) also remains unexplained (and was also unexplained in their paper). Such examples are also possible in Ekegusii.

(30)

a.	*Wafula*	*a-a-nyw-a*	*ka-ma-beele*	*ba-ba-ana*	*ba-a-lil-a.*
	Wafula	SM.C1-ACT-drink-FV	c6-C6-milk	C2-C2-child	SM.C2-ACT-cry-FV

Wafula drank milk, so the children cried. [Lubukusu]

b.	*Wafula*	*a-ka-nyw-a*	*a-ma-beere*	*a-b-ana*	*ba-ka-rer-a.*
	Wafula	SM.C1-ACT-drink-FV	C6-C6-milk	C2-C2-child	SM.C2-ACT-cry-FV

Wafula drank milk, so the children cried. [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.[17]

4.3 Summary of Section 4

We summarize how the properties of the morphologically marked narrative use in Bantu listed in (31) align with our account.

(31) a. The narrative is marked through a tense-neutral morpheme in the TAM slot. Sometimes the marking is through tonal melody or zero morpheme.[18]

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.

We have identified the morpheme described in (31a) as the actual morpheme. The properties in (31b, c) are consistent with our notion of dependency of the actual clause on a contingent antecedent. We predict (31d) based on the need for a contingent antecedent and the redundancy of marking an assertion with actual morphology, but as pointed out in Section 4.2, this leaves some apparent counterexamples unexplained. Property (31e) appears to be a consequence of the fact that actual-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 actual 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: 222). 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 actual morpheme and the complement distribution of the actual morpheme share the same semantic restriction supports our unified treatment.

5. 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

17. 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 Lubukusu *Wekesa a-ka-sha-end-a* where *ka* is the actual form, which is simply translated as 'Wekesa has gone' but with the implication as noted. We have similar examples from Kirundi, Kikuria, Lubukusu and Kidigo. 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.

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

in typological, diachronic or acquisitional terms.[19] To take the last first, one may ask if the interpretation signaled by actual 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 actual morphology 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 actual morphology 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 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. If, however, only the narrative context makes the usage learnable, then it is predicted that the complement clause use cannot stand alone in any language.

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. Conclusion

We have argued that the morphology we call "actual" and its counterparts in other Bantu languages where it is called "narrative" or "consecutive" signals that UTT is committed to the actual-clause being true as a consequence of its contingent antecedent being true. We have explored the relationship between the actuality reading in actual clause complements and the use of actual morphology 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 UTT presents as true a proposition that is not presupposed to be true. By syntactic tests, we showed that actual clauses can indeed be complements, even though they function as assertions. The complement clause usage is thus predicted to be incompatible with 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 'actual' is a complement clause type, then the language uses actual morphology for narrative clause-chaining (but not vice versa). We

19. 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 *et al.* 2019), which they liken to Kiswahili, but we have not investigated whether or not there is a complement actual clause effect in Sotho.

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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ABBREVIATIONS

ACT	actual marker
AM	associative marker
APPL	applicative marker
C	noun class, typically followed by a noun class number, e.g. C6-
CAUS	causative
COMP	complementizer
COND	conditional
DEM	demonstrative
DEP	dependent
DISJ	disjoint marker
EXPL	expletive
FOC	focus
FUT	future
FV	final vowel
INF	infinitive
NARR	narrative
NEG	negation
OM	object marker
PASS	passive
PFV	perfective
PST	past
SBJV	subjunctive
SG	singular
SM	subject marker
SUBJ	subjunctive
TNS	tense

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