The Directions of Selection

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The Standard view of clausal selection: ***Predicates select the kinds of clauses that they can take as complements,*** that is, that ***the selection relation between predicates and their clausal complements is asymmetric.***

Today's Thesis: Specific clause types can just as easily be thought of as selecting the class of predicates that they can co-occur with.

Ultimately, I think "selection" is not directional, but is just about semantic compatibility. There are some theories that bear some aspects of the compatibility approach, most explicitly, Moulton (2009, 2015) Kratzer (2016), Elliott (2017), Mayr (2018), Özyildiz (2017) Bogal-Allbritten and Moulton (2018) a. o. about which more perhaps in discussion.

The Asymmetric View: Clausal complements fit into what predicates require. A factive predicate takes a *that*-clause that will be interpreted as presupposed, a verb of saying will take a *that*-clause that will be interpreted as a speech report, a *that*-clause that is taken by a propositional attitude predicate will be taken as having the interpretation determined at least in part by the accessible worlds the predicate makes available, etc.

In the Asymmetric View, clausal complements are shaped to the needs of predicates.

I am not arguing for anything new, but rather for a change in perspective.

A) There are some semantically rigid clause types that might be said to "select" the sorts of predicates they can co-occur with – i.e., the direction of selection might be thought to operate in reverse.
B) The meaning of matrix predicates can shift systematically according to the semantic contribution of their complements
C) Some complements are only partially licensed by the relation they bear to the predicate that selects them. Other conditions must be met for the complement to be licensed.

I offer three case studies where clause types influence/predict which predicates they are compatible with: the English inherent subjunctive, the Lubukusu actual clause, and the construction of Medumba attitude reports.

1.0 English Inherent Subjunctive

The English inherent subjunctive (EIS) is always a complement clause, it has a distinctive morphology (lack of agreement) and it always has a deontic meaning, evoking an obligation that some event or state of affairs come about.

1a) $[[must]]^{w,f} = \lambda p_{st}.\forall w' \in \cap f(w)$: $[p(w') = 1]$

b) $\cap f_{\text{deontic}}(w) = \lambda w'.w'$ is compatible with the laws in w

However, EIS is more restrictive than *must* (or *should*)

2a) John requires that Lyla leave
b) *Lyla leave./*That Lyla leave.
c) Lyla must/should leave.
d) *Warren will decide/determine/insure that Lyla leave.
e) Warren will decide/determine/insure that Lyla must/should leave.

Assistance requirement -Verbs that take EIS complements imply that what should come about is not in the power of the matrix clause subject, as, for example, is the case for *advise, ask, beg, demand, desire, insist, petition, prefer, propose, recommend, request, suggest,* and *urge*. However, if the matrix subject is the sufficient source to bring about the event or state of affairs, EIS is not possible, as the contrast between (2d) and 2e) shows in comparison with EIS-taking predicates shows.

EIS in (3a) is odd because it seems that I am demanding to do something that I can do on my own power, and as such, (3b) sounds much better.

3a) #I demand that I leave
b) I demand that I be allowed to leave.

It is sometimes suggested (e.g., Portner, 1997) that EIS is a form of embedded imperative, but this is too blunt, especially since Portner treats *for-to* infinitives as having the same character.

4a) John said for Bill to leave.
b) *John said that Bill leave.

Portner notes the difference but suggests that the unacceptability of (4b) is a sort of lexical gap. However, the difference is that (4a) does not require the participation of a third party to bring about the prejacent – in this it is like *decide*, so the implicit "expediter" argument is not available. Moreover, expediter is rarely an addressee of PAH, especially for the adjectives.

Agent of purpose requirement

6a) It is necessary that water boil at 100 degrees centigrade
b) It is necessarily the case that water boils at 100 degrees centigrade.

It is difficult to get a reading of (6a) along the lines that there could be no other outcome on account of natural law (unless, perhaps, if the whole sentence is the consequent of a conditional), whereas that reading is readily available for (6b).

The same generalization holds for all adjectives that take EIS, such as *adamant* and *insistent*, as well as those that take an expletive subject including *advisable, all right, appropriate, best, better, compulsory, crucial, desirable, essential, expedient, fitting, imperative, important, legitimate, mandatory, necessary, optional, okay, permissible, preferable, right, satisfactory, sufficient, urgent,* and *vital.*

These contrast with adjectives like *likely, possible, obvious* and so forth that do not evoke a party interested in the outcome.

7a) It is likely/possible/obvious that is there.
b)*It is likely/possible/obvious that he be there.

For *likely*, there is no obligation involved, that is, there is no purpose that must be served by the prejacent *that he be there*. Compare adjectives above.

Systematic shift A difference between EIS and the periphrastic subjunctive is illustrated by the contrast in (8).

8a) The lawyers have insisted that Lyla leave.

b) The lawyers insisted that Lyla must leave.

The difference is subtle, but (8b) can be taken to be advice, as in a situation where Lyla is involved in a scandal and the lawyers in the office of risk management are making a recommendation to the CEO, but (8a) is not understood as advice, but as a demand.

When a verb an EIS-taking verb can also describe a non-obligating conveying-information event, the choice of complement distinguishes the two readings:

9a) Addison advises/(strongly) suggests/insists/is adamant that Mary be there.

b) Addison advises/suggests/insists/is adamant that Mary should be there.

For these cases we see systematic shift in the nature of a predicate based on the CP it takes.

The EIS prejacent cannot have already come to pass before the time of the matrix event.

10a)*Addison advises/insists that Mary have been there.

a) Addison advises/insists that Mary had to/should have been there.

Here the success of EIS complementation depends on more than the matrix predicate, but also the temporal relations between the matrix and subordinate clauses. (which is about compatibility, not selection, I would argue, but not here).

The presence of EIS can coerce a purpose for verbs of desire and the inadequacy of the agent of purpose to insure that the prejacent is true.

Want, prefer and *desire* can (be coerced to) imply will and a purpose, though when these verbs take a DP or infinitive complement they do not imply the need for assistance

11a) Kees wants/prefers/desires tulips.

b) Kees wants/prefers/desires to buy tulips

c) Kees wants/prefers/desires that there be tulips.

d) Kees demanded tulips.

– The addition of an EIS complement brings the assistance requirement with it (less easily for *want* for most American English speakers). By contrast, *demand* implies all the matching requirements for EIS, i.e., Kees wants tulips that he does not have and that someone else can provide.

Suppose for discussion that we assume a version of Hintikka's operator approach to the semantics of PAVs.

$$[[\text{believe}]] = \lambda p_{st}.\lambda x_e.\lambda w_s.\forall w'[w' \in Dox_{x,w} \rightarrow p(w')=1]$$

Instead of doxastic accessible worlds ($Dox_{x,w}$) we can informally think of EIS complements as only compatible with predicates invoking bouletic accessible worlds that permit or require a certain deontic imposition.

If the worlds that are accessible to the propositional attitude holder (PAH) according to a predicate P satisfy the restrictions (12a,b) imposed by EIS, then P can take EIS as a complement. In this respect it is the predicate that selects the possible predicates it can occur with.

12) **English Inherent Subjunctive**: The worlds of evaluation for the EIS prejacent are
(a) worlds *w* where the truth of the prejacent serves a purpose p and
(b) in every *w'* ∈ *w,* the agent of p in *w'* must be incapable of insuring without assistance that the prejacent is true in *w'*.
The prejacent is true in all such worlds.

The matrix predicate (not, apparently, the conversational background) must therefore provide an explicit or implicit PAH who is the agent of purpose and does not control the outcome (i.e., that the prejacent is true in all accessible worlds) without assistance.

- EIS has to be a subordinate clause because input from P determines what worlds are accessible to the agent of purpose. **Derives contrast (2b) vs.(2c).**

The agent of purpose is not always an explicit argument for the predicate and for main clauses without an overt predicate-specified agent of purpose, an implicit agent of purpose (implied by the predicate) is sometimes taken to be the speaker, as in (6a) (with adjective *necessary*)

- This suggests that the agent of purpose is a variable in the semantics of EIS that must be bound locally by the agent of purpose of the attitude predicate, implicit or explicit.
- Thus only verbs that have an antecedent for the agent of purpose variable, and perhaps an antecedent for an expediter variable, are possible complement-takers of EIS.

I probably won't have time to return to this idea.

Thus EIS could be seen as selecting for the predicates it can co-occur with
***The predicates that take EIS vary*:** Some have overt subjects and potential direct objects (*ask*), some have subjects and potential prepositional objects (*suggest to someone, demand of someone*) and some have no overt (prepositional) object (*prefer*). Some adjectives have subjects that are the interested parties (*adamant*) and others have expletive subjects (*crucial, necessary*) with potential PPs containing agent of purpose (*important to me*), and so forth.

Since the syntactic predicates vary and EIS is constant, it is more natural to assume that EIS is a semantic selector of the predicates it co-occurs with – rather than the other way around.

Predicate-Complement Clause (P-CC) compatibility: There is overlapping semantic selection –the worlds that are accessible according to the selecting predicate further condition (and narrow) the worlds compatible with restrictions on EIS.

- Coercion of a clause-taking predicate, where it is possible, insures that the worlds made accessible by the predicate can enable the interpretation of EIS.

Problem for Everyone: Why does coercion often fail?

Coercion does not work for the verb *say* in English.
13a)*Sally said (to Tom) that Barbara be there.
b) Sally said (to Tom) to be there.
Say can be coerced to be directive, but not so far as to satisfy EIS. What must go into lexical entries to insure that this is so?

Some generalized conclusions
14a) There are clause types with a rigid semantics that determines what sorts of predicates can

co-occur with them.

b) Sometimes semantically rigid clause types can coerce predicates to match their selectional mandates – in other words, the clause type that is a complement to a predicate can shift the semantic interpretation of certain classes of predicates in predictable ways.

d) Some clausal complements need to be compatible with more than just the predicates they co-occur with.(e.g., EIS requires a certain sequence of events)

2.0 Lubukusu Actual Clauses –

A clause type with semantically rigid actuality entailment

The inventory of clause types in Lubukusu is partially similar from English in that it has, indicative, infinitive and subjunctive clause types, though the Lubukusu subjunctive does not have to be deontic. (Semantics of subjunctive clause types vary significantly across languages)

However, Lubukusu also has ***actual clauses*** as described by Safir, Baker and Sikuku (2012, 2020) which, though they cannot be matrix clauses, are posited as true in the utterer's world, that is, they have an inherent ***actuality entailment*** (see Bhatt, 1999, and Hacquard, 2006).

A typical example of an actual clause is (15a)

15a) Wekesaá-a-bólel-a Wafula a-a-cha
WekesaSM.c1-PST-tell-fv Wafula SM.c1-ACT-go-fv
'Wekesa told Wafula to go (and Wafula did go)

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

As the English continuation suggests, actual clause interpretation requires that what x wants has come to pass according to the utterer of the sentence (UTT). If the proposition denoted by the actual clause (the actual clause proposition) is then denied, the speaker is self-contradictory, so (15b) is unacceptable.

Actual Morphology. The actual prefix is realized in the Lubukusu morphological template in the same position where tense normally appears, that is, right after the subject marker, as illustrated in (16). The paradigm of affixes that can occur in that morphological slot (and are in complementary distribution) are listed in (16).

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

17) Non-future tense and modality expression on Lubukusu verbs

	SM.c1-TNS-eat	SM.c9-TNS-eat	
Simple past:	álya	yálya	SM-a-Verb-a
Today past:	àliile,	eliile	SM-Verb-il-e
Recent past:	áalíile,	yálíile	SM-a-Verb-il-e
Perfective:	áàlya,	yáàlyà	SM-à-Verb-a
Actual:	**ààlyà,**	**yààlyà**	**SM-a-Verb-a**
Subjunctive:	ályé,	élyé	SM-Verb-e
Infinitive:	khulya	khulya	c15-Verb-a

What distinguishes actual morphology from the other pasts and perfect is that vowel [a] is both long and low. It has agreement like indicatives do.

Actual clauses also have an aspectual existence entailment - The proposition that the actual clause complement denotes is not only true in the world of UTT; the prejacent must also be complete, in progress, or report a state that is, in effect, or completed at the time of utterance and it also must be a positive event. An actual clause cannot be (internally) negated.

18)*Wekesa ásubila ali Wafula se aalya eng'eni tá
Wekesa á-a-subil-a a-li NEG a-a-ly-a e-ng'eni NOT
Wekesa believes AGR.c1-that Wafula not SM.c1-ACT-eat-fv (a) fish
'Wekesa believes that Wafula did not eat a fish (and he did not).'

Similarly, putting the matrix verb in a future tense is also incompatible with an actual clause complement, since in that case the event cannot have taken place at the moment of UTT's utterance. As the contrasting (b) sentences show, *khu*-infinitives (verbs marked as nominal class 15), are all acceptable when the same predicates bear a future tense.

19a)*Wafula á-khá-eny-e a-a-bey-a Maria
Wafula SM.c1-FUT2-want-fv SM.c1-ACT-marry Mary
'Wafula will want ACT-marry Mary.'
b) Wafula á-khá-eny-e khu-bey-a Maria
Wafula SM.c1-FUT2-want-fv c15-marry Mary
'Wafula will want to marry Mary.'

20a)*Wafula á-khá-khak-e a-a-ly-a e-ng'eni
Wafula SM.c1-FUT2-try-fv SM.c1-ACT-eat c9-fish
'Wafula will try ACT-eat the fish.'
b) Wafula á-khá-khak-e khu-ly-a e-ng'eni
Wafula SM.c1-FUT2-try-fv c15-eatc9-fish
'Wafula will try to eat the fish.'

21a)*Wafula á-khá-pang-e a-a-ly-a e-ng'eni
Wafula SM.c1-FUT2-plan-fv SM.c1-ACT-eat c9-fish
'Wafula will plan ACT-eat the fish.'
b) Wafula á-khá-pang-e khu-ly-a e-ng'eni
Wafula SM.c1-FUT2-try-fv c15-eatc9-fish
'Wafula will plan to eat the fish.'

The two assumptions that have been made about what actual clauses entail for the actual clause prejacent are as follows, roughly stated.

22a) The actual clause prejacent must be true in the world of UTT.
b) The event or state of affairs denoted by the actual clause prejacent must be complete or in progress at the moment of speech by UTT.

2.1 Actuality Entailment – What is distinctive about Lubukusu

Actual clauses have what Bhatt (1999) and Hacquard (2006) called an 'actuality entailment' much like that of implicatives (Karttunen, 1971). Hacquard (2006) has described this effect for examples in French when past perfect is applied to the verbs *pouvoir* and *devoir*.

23a) Pour aller au zoo, Jane pouvait prendre le train.
To go to the zoo, Jane can-past-IMPV take the train
b) Pour aller au zoo, Jane a pu prendre le train.
To go to the zoo, Jane can-past-PFV take the train

As Hacquard puts it, "The truth conditions of [(23a)] are equivalent to its English translation: there is a world among all accessible worlds in which Jane goes to the zoo where she took the train to get there. This is compatible with a scenario in which Jane did not take the train in reality (nor went to the zoo, for that matter). Things are different with [(23b)]: for the sentence to be true, Jane must have taken the train in the actual world. **Any continuation stating that she, in fact, did not take the train, will come out as a contradiction.**"

Further particulars of the French construction that induces an actuality entailment do not match the Lubukusu actual clauses, however.

- The French effect arises from an interaction between specific verbs and past perfective.
- Kartunnen's implicative verbs (like *succeed* and *manage*) are listed in the lexicon.
- Lubukusu, by contrast, actual clauses inherently have an actuality entailment no matter what predicates they are complements of.
- The morphology of actual clauses is the exponent that induces the interpretation, not any other combination of affixes or aspects.
- the French effect can hold in matrix clauses, and Lubukusu actual clauses cannot be matrix clauses.

24)*Wafulaaalya kamatoore
Wafula a-a-li-a ka-ma-toore
Wafula SM.c1-ACT-eat-fv c6-c6-banana
'Wafula ate the bananas.'

2.2 Selection of predicates by actual clauses

The predicates in (25) are among those that permit AC complements and the predicates in (26) are among those that do not permit them.

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

26a) *Maria á-isindukh-a bali a-a-khil-a ku-mu-inyawe
Mary SM.c1.PST-surprise-fv that SM.c1-ACT-win c3-c3-game
'Mary was surprised that she ACT-won the game'

b) *Wekesa á-a-khílw-a/á-a-lób-a a-a-ch-a engo
Wekesa SM.c1-PST-fail-fv/refuse SM.c1-ACT-go-fv home
'Wekesa failed/refused to go home.'

Thesis: Actual clauses select (restrict) the class of predicates they are compatible with by virtue of what actual clauses mean.

For example, ***actual clauses are only compatible with predicates that do not presuppose the truth of their complement propositions.***

This is consistent with what actual marking contributes, that is, ***a proposition that is treated as possibly true is in fact true.***

How actual clauses function in discourse – a partial proposal

- UTT is committed to the truth of the actual clause proposition they describe, but UTT does not presuppose that the addressee takes the actual clause proposition to be true.
- In this respect, ***actual clauses are essentially assertions made by UTT.***

The incompatibility of actual clauses with factive predicates is predicted.

Factive predicates are not acceptable with actual clause complements.

27a)*Maria á-isony-a bali a-a-khil-a ku-mu-inyawe
Mary SM.c1.PST-regret-fv that SM.c1-ACT-win c3-c3-game
'Mary regretted that she ACT-won the game.'

b) *Maria á-a-sangal-a bali a-a-khil-a ku-mu-inyawe
Mary SM.c1.PST-happy-fv that SM.c1-ACT-win c3-c3-game
'Mary was happy that she ACT-won the game.'

We know *-isoni-, -sangal-,*and *isindukh* are factive because the presupposition of truth survives negation of the matrix predicate, as in (28b) where the complement is an indicative clause.

28a) Alice á-isóny-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 sé á-isóny-a bali Wekesa á-a-béy-a Maria tá
Alice NEG SM.c1-regret-fv that Wekesa SM.c1-PST-marry-fv Maria not
'Alice does not regret that Wekesa married Mary.'

For both (28a) and (28b) the speaker presupposes that Wekesa married Mary and that both the addressee shares this presupposition, and that the reported experiencer takes it to be true. Thus factive complements, unlike actual clauses, are incompatible with assertions.

In this sense, actual clause complements could be said to select for non-factive predicates such as *bol-* 'tell', *subil-* 'believe', *khalak* 'decide', *eny-* 'want', *khak-* 'try' , *reb-* 'request', *ulil-* 'hear', and *pang-* 'plan'.

If matrix indicatives are unmarked assertions, perhaps that is why actual clauses, are not possible matrix clauses. It could be that actual clause morphology is thus redundant, and so cannot be used where the unmarked strategy is available.

The same sort of redundancy argument predicts why actual clauses, unlike indicatives, cannot take AGR-li complementizers.

The contrast between *bali* and AGR-*li* has carries with it an evaluative effect:

- a proposition of a clause introduced by AGR-*li* is taken by UTT (and/or the matrix subject) to be likely true. (See Diercks, 2013)
- a proposition introduced by invariant *bali* carries no commitment on the part of UTT and/or the matrix subject that the complement proposition is true.

A potential inference where both forms are available is that the truth of the complement proposition is doubtful. This is illustrated in (29) from Diercks (2013:295) (with his glossing and where ___ is the position where either *bali* or *ali* could occur).

29) Mosesi a-ul-ile ___ Sammy k-eba chi-rupia
1Moses 1S-hear-PST COMP 1Sammy 1S-stole 10-money

'Moses heard that Sammy stole the money.'
a) If Moses does believe it: bali/ali
b) If Moses doesn't believe it, or if the speaker doubts it: bali/*ali

Diercks notes that factive predicates never occur with AGR-*li* and relates this to the fact that they are presupposed. Actual clauses often occur without an overt complementizer, but they can appear with *bali* and never with AGR-*li*.

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

Since an assertion carries the presupposition that UTT is committed to the truth of the proposition, an actual clause complement is considered by UTT to be just likely to be true, but it is actually true. The AGR-*li* complementizer is consistent with this, but both weaker and redundant, and so it cannot be used.

- When *bali* is used it conflicts with the actuality entailment by distancing UTT from a commitment to the truth of the complement.

The contribution of the predicate that takes an actual clause

It is always the case that the actual world in which the actual clause proposition is true must also be a world that is shaped by the predicate it is a complement of. ***The predicate might not select for the actual clause, but worlds the predicate determines are accessibility conditions on the AC assertion about the actual world***

The aspectual restriction on actual-embedding predicates

The actual clause proposition must be true is that the actual clause complement must report an event that is complete at the time of utterance or must be a state of affairs that holds at the time of utterance.

Prediction: ***Any predicate that is incompatible with the possibility of its complement proposition being realized at the time of utterance will not permit an actual clause.***

Thus verbs like *–khilw-*, *-lob-* and *–khingilil-*, meaning 'fail', 'refuse', and 'prevent', respectively, which imply that the complement proposition is not a realized event or state, do not permit actual clause complements, though they are fully compatible with infinitives.

32a) Wekesa á-a-khílw-a/á-a-lób-a khu-ch-a engo
Wekesa SM.c1-PST-fail-fv/refuse c15-go-fv home
'Wekesa failed/refused to go home.'
b)??Wekesa á-a-khílw-a/á-a-lób-a á-ch-é engo
Wekesa SM.c1-PST-fail-fv/refuse SM.c1-go-fv.subj home
'Wekesa failed/refused [go home].
c)*Wekesa á-a-khílw-a/á-a-lób-a á-a-ch-á engo (Indicative complement)
Wekesa SM.c1-PST-fail-fv/refuse SM.c1-PST-go-fv home
'Wekesa failed/refused [went home].
d) *Wekesa á-a-khílw-a/á-a-lób-a a-a-ch-a engo
Wekesa SM.c1-PST-fail-fv/refuse SM.c1-ACT-go-fv home
'Wekesa failed/refused to go home.'
33a) Wekesa á-a-khíngilil-a Maria khu-ch-a engo
Wekesa SM.c1-PST-prevent-fv Mary c15-go-fv home

‘Wekesa prevented Mary from going home.’

b)??Wekesa á-a-khíngilil-a Maria á-ch-é engo
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-go-fv.subj home
‘Wekesa prevented Mary [go home].’

c) *Wekesa á-a-khíngilil-a Maria á-a-ch-a engo
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-PST-go-fv home
‘Wekesa prevented Mary she went home.’

d) *Wekesa á-a-khíngilil-a Maria a-a-ch-a engo
Wekesa SM.c1-PST-prevent-fv Mary SM.c1-ACT-go-fv home
‘Wekesa prevented Mary she went home’

Thus it could be said that ACs, by virtue of what they mean, only select predicates that do not preclude the possibility that the events or states of affairs denoted by the prejacent could have taken place.

Actual clauses are not polarity sensitive: As illustrated in (33a,b), *-subil-*, ‘believe’, does not commit UTT to the truth of the complement proposition whether it is negated or not, but even if *subil* takes an actual complement and is negated, as in (33b), the result is acceptable.

34a) Alice sé á-subil-a a-li Wekesa á-a-béy-a Maria tá
Alice NEG SM.c1-believe-fv c1-that Wekesa SM.c1-PST- marry-fv Maria not
‘Alice does not believe that Wekesa married Mary.’

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

In (33b) the actual clause is acceptable in the scope of matrix negation with *–subil-* because the event is only evaluated for non-future existence in the world of UTT, a belief world accessible to Wekesa, where Wekesa may have a false belief about Wafula. (Compare 14b).

Key generalizations about the meaning of actual clauses.

35a) The actual clause proposition is must be true in the world of UTT.

b) The event or state of affairs denoted by the actual clause proposition must be complete or in progress at the moment of speech by UTT.

c) The actual clause functions as an assertion, such that the actual clause proposition is not presumed by UTT to be presupposed by any addressee.

These three properties select for the class of predicates that are compatible with an actual clause complement..

One last point: ***Actual clause complementation can shift predicate meaning*** Consider the predicate *–nyál-* in Lubukusu.

36a) Wekesa á-a-nyál-a khu-khw-ombakh-a enju, ne kakhali
Wekesa SM.c1-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-manage-fv SM.c1.ACT-build-fv house and though

se á-a-nyóol-a bu-bw-aangu tá
NEG SM.c1-PST-find-fv c14-c14-chance not
'Wekesa managed/succeeded to build the house, *but he never got the chance.'

While the infinitive complement for *–nyál-* shows the same ambiguity we would expect for the English predicate *be able*, when *–nyál-* takes an actual clause complement its meaning shifts in a completely predictable way; If Wekesa's is able to bring about the building of the house and according to UTT, Wekesa has built the house, then Wekesa has succeeded. ***The verb* –nyál- becomes implicative by virtue of its actual clause complement.**

37a) ACs have a rigid semantics that determines what sorts of predicates they can co-occur with.
b) AC complementation depends on more than the predicate that takes it as a complement.
(e.g., * with future tense on the complement-taking verb).
d) AC complements can shift the meaning of classes of predicates in predictable ways.

3.0 Developing an attitude – Maybe no time for this

There is no reason to expect that the PAVs of English will match those of another language, but in translation, it makes sense to seek English equivalents. Yet how do we determine that one English translation rather than another is closer to the intended meaning in the target language.

Underspecified attitudes: Medumba PAVs

Gatchalian et. al. claim there are only four or five PAVs (including "say") in Medumba and that attracted my attention – how would the full range of expressible attitudes be constructed?

- They are wrong about the number, but they are right that there are relatively few roots that are exclusively PAVs in Medumba.
- There are also other verb roots that have non-attitude readings when they don't take clausal complements but they can express propositional attitudes when they do.
- Other building blocks of attitudes include construction with modal verbs, adverbials, verb affixes, arguments embedding animacy (emotives), etc., from which I abstract away.

For example, there is only one root for *think* and *believe* in Medumba and it is not clear that there is any semantic "think/believe" distinction. The root *kʷɛ̀-də̀* passes tests and fails tests for both.

- *Think* is not gradable, but *kʷɛ̀-də̀* is. (like *believe*)
- *Think* can take a reflexive indirect object, but *kʷɛ̀-də̀* cannot (like *believe*)
- *Believe* can take a direct object, but *kʷɛ̀-də̀* cannot. (like *think*)

There is, however, a "believe"/"accept" distinction.

M4 a) mʉ́ bə́m/*kwɛ̀də́ jʉ́ʉ̀n rə̀lìʒɔ̀ŋ lí
1sg.H accept/think Agr religion 1Prox
I accept/*think this religion.

Medumba also has a system of finite clause types largely distinguished by their complementizers as pointed out by Gatchalian et. al., 2018.

[mbúù]- C.HL introduces polar options, much like English *whether* or *if*.
[mbùú] – C.LH has deontic force.
[mbù] – C.L seems to be the default when there is not deontic or optative reading - it might be characterized positively as introducing reports of belief or speech.(tentative)
[ndà] manner or concurrent, much like English *when*-adjuncts or *as*-clauses, but not quite –

Note on future work:

- C.HL clauses are not only marked on the C – the verb in these clauses has a distinctive tone melody imposed on it – clause type more than just the choice of C.
- Medumba does not appear to have modal auxiliaries, but modality can be introduced by embedding the predicate *bʰò* "be good" which takes a C.LH clause, e.g., "say it is good" followed by C.LH clause = "require that…"
- Not clear whether *mbùú* clauses have different semantic or pragmatic deontic force from predicate+be.good expressions. (e.g., along lines of English EIS vs subjunctive Aux)

We focus on the first three Cs. Some predicates can take all three, but in some cases, ***the meaning of the predicate shifts.***

M5 a) Nùmí kʷè-də mbù Màrjàá fɔ́ɔ́ nù
Numi think C.L Mary.H wrong.do.H thing
Numi thinks that Mary is guilty.

b) Nùmí kʷè-də mbúù Màrjàá fɔ́ɔ́ nù lá
Numi think C.HL Mary.H wrong.do.H thing C
Numi guessed whether Mary was guilty.
Numi thinks Mary is guilty or that she is not guilty but he is not saying.

c) *Nùmí kʷè-də mbùú Màrjàá fɔ́ɔ̀ nù
Numi think C.LH Mary.H H.wrong.do thing
Numi thinks Mary should wrong do things.

Notice with the polar option C.HL there are at least two interpretations.

One is quite peculiar to English ears – It seems to allow for a contradiction, but the result of the contradiction is not illformedness, but a "cagey" reading, that is, the PAH has a belief that P is true or that P is false but the PAH is not revealing what s/he believes. This is potentially compatible with Mayr (2018), who argues that polar option clauses can occur wherever their interpretation does not lead to a contradiction or a tautology. In this case it leads to a contradiction, but Medumba uses this contradiction to express the cagey reading.

More problematic is the "guess" reading for *kwèdə* with the polar C.HL, which is not contradictory – rather the predicate is shifted and perhaps ***coerced***. Something in the lexical entry of *kwèdə* must make the shift possible or block it. Underspecification/blocking is still a mystery.

Now consider the "say" verb *ʧúp*.
M6 a) Numi ʧúp mbù Màrjàá lùú

Numi say C.L Mary.H leave.H
Numi says that Mary left.

b) Numi ʄúp mb~~ùú~~ Màrjà lúù
Numi say C.LH Mary H.leave
Numi ordered Mary to leave.

c) Numi ʄúp mb~~úù~~ Màrjà àʔ lù lá
Numi say C.HL Mary FUT leave C
Numi decides if Mary will leave.

With C.L, it has the speech report reading we associate with the "say" meaning. With C.LH it is coerced into an "order" reading (notice that C.LH clauses are not like EIS, which cannot coerce in the same way). Finally, the "decide" reading with polar C.HL is a bit like English *John says if Mary leaves or not* where saying makes it so.

But what makes *say* flexible when *bét-tə́* "ask" is not. *bét-tə́*, unlike English *ask*, cannot take the deontic C.LH clause because *bét-tə́* is always and only a request for information.

M7 a) Numi bɛ́t-tə́ mb~~úù~~ Màrjàa fɔ̀ɔ́ nù lá
Numi ask C.HL Mary.H wrong.do.H thing C
Numi asks if Mary is guilty.

b)*Numi bɛ́t-tə́ mb~~ùú~~ Màrjà fɔ́ɔ̀ nù
Numi ask C.LH Mary wrong.do thing
bét-tə́ can only be a request for information

What is needed is a theory of lexical entries that allows or blocks coercion for a given predicate.

M8 a) Nùmí bɔ́m mb~~ù~~ nsí b~~ú~~ á mv~~ù~~
Numi accept C.L god be Foc chief
Numi accepted (believes) that god is Lord.

b) Nùmí bɔ́m mb~~úù~~ nsí b~~ú~~ á mv~~ù~~ lá.
Numi accept C.HL god be Foc chief C
Numi accepted or did not accept (believes) whether god is Lord or is not
(Numi accepts that God is Lord or that God is not Lord but he is not saying which.

c) Nùmí bɔ́m mb~~ùú~~ nsí b~~ú~~ á mv~~ù~~
Numi accept C.LH god be Foc chief
Numi accepted (believes) that god Be Lord (maybe in his life).

d) Nùmí bɔ́m ndà nsí b~~ú~~ á mv~~ù~~ lá
Numi accept C god be Foc chief C
Numi accepted (believes) the way in which/manner god is Lord.

The emphasis of this account of a language with underspecified attitudes invites comparison with

Bogal-Allbritten (2016) on Navaho. Here, however, the emphasis is on the way that clauses with a relatively rigid semantics contribute to the construction of attitudes.

M9 a) The C.LH and C.HL clauses show a certain semantic rigidity.
b) They cause attitude shift in consistent fashion
c) They can coerce interpretation in some cases.

4.2 Where is the syntax in all of this?
Section under construction!

5.0 Conclusion

For at least some kinds of clause types, their distribution as complements follows from what they semantically require of predicates they are compatible with. The relation is not one-sidedly asymmetric.

Many have now embarked on a program to understand what inherent properties clause types contribute to compatibility, and this investigation is part of that program.

Appendix: Locality and truth commitment

For actual clauses, there seems to be an indexicality variable bound by UTT in context.

- **However, the actuality of the embedded assertion shifts according to the minimal information source.**

  For something like "John says that Bill believes that Mary ACT-be guilty" only requires that the AC prejacent is true in John's world. This suggests that there is a variable a source variable in the AC bound by the nearest information source (usually the speaker).

A similar generalization seems to extend generally to actuality entailments, e.g., implicatives in English such as *John says that Mary managed to eat the whole thing*, *but (#that she) didn't eat the whole thing.* The speaker is not responsible for the actuality entailment.

And maybe it extends to factivity
(44a) and (44b) seem contradictory, or at least they overturn a presupposition that is accepted before the disjunction. Do you get a contrast in the strength of the contradiction intuition between the (a) and (b) examples in (45-46)?
44a) It isn't upsetting that Mary left, but she didn't leave (contradictory)
b) John isn't upset that Mary left, but she didn't leave (contradictory)
45a) John hopes that it is upsetting that Mary left, but she didn't leave
b) John told me that it is upsetting that Mary left, but she didn't leave
46a) John hopes that Mary is upset that the children left, but they did not leave.
b) John said that Mary is upset that the children left, but they did not leave.
Is the speaker of the whole sentence contradicting himself or is it only the subject of the matrix verb whose belief/statement is contradicted?

Teaser: Is there an indexical variable corresponding to the common ground in context in the left periphery of factive and actual clauses that can be shifted independently of local persons?