

C-Agree is local subject-verb agreement in Kipsigis

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Kipsigis (Nilotic, Kenya) has been reported to have upwards-oriented complementizer agreement with a matrix subject (Diercks and Rao 2019, Diercks et al. 2020).^{1, 2}

- (1) a. \hat{u} :ŋgén \hat{u} :lé \emptyset -rú-è Kíbê:t.
1SG-know.IPFV 1SG-C 3-sleep-IPFV Kibeet.NOM
'I know that Kibeet is sleeping.'
- b. \hat{i} :ŋgén \hat{i} :lé \emptyset -rú-è Kíbê:t.
2SG-know.IPFV 2SG-C 3-sleep-IPFV Kibeet.NOM
'You know that Kibeet is sleeping.'
- c. \acute{i} -ŋgèn Kíplàngàt **kò**-lé \emptyset -rú-è Kíbê:t.
3-know.IPFV Kiplangat.NOM 3-C 3-sleep-IPFV Kibeet.NOM
'Kiplangat knows that Kibeet is sleeping.'

Main claim:

- The C-agreement pattern raises questions about the directionality and locality of agreement.
- We argue that what has been described as a “say”-based complementizer in the language is in fact the lexical verb “say”.
- Complementizer agreement in Kipsigis is logophoric agreement between a verb and its (often covert) local subject.
- Our theory makes use of an eventuality-based model of attitude and speech reports, where ‘say’-based complementation instantiates $\langle v, t \rangle$ -type clausal complements.

¹Glossing abbreviations follow the Leipzig glossing rules with the addition of C = complementizer, IT = itive, and VENT = ventive. Tone is transcribed whenever possible, but some transcriptions are incomplete because of sound difficulties in Skype elicitations. Additionally, the tone on *le* is always transcribed as H, but it should be noted that it sometimes becomes low when it is followed by a word that starts with a H tone. The details of this sandhi phenomenon are currently not well-understood.

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1 Previous accounts of upwards-oriented C agreement

- A number of African languages have been reported to display upwards-oriented complementizer agreement, where C agrees with the matrix subject (e.g. Baker (2008) on *Kinande*, Idiatov (2010) on *Mande languages*, Diercks (2013) on *Lubukusu*, Duncan and Torrence (2017) on *Ibibio*, Nformi (2017) on *Limbum*, Diercks and Rao (2019) on *Kipsigis*, Letsholo and Safir (2019) on *Ikalanga*).³
- This is different from the well-studied pattern in Germanic, where C agrees with the subject of the embedded clause (Shlonsky 1994, Zwart 1997, van Koppen 2005, 2012, Fuß 2008, 2014, Haegeman and van Koppen 2012).
- Two questions are addressed regularly within the literature on upwards-oriented complementizer agreement: a) the direction of Agree and b) the nature of the goal.
- Upwards-oriented agreement via ...

... upward Agree directly between the embedded C head and the matrix subject (Nformi 2017, Letsholo and Safir 2019, McFadden and Sundaresan 2020)

(2) *Upward Agree account*

[_{vP} SUBJECT_[φ] ... [_{ForceP} FORCE_[uφ] ... [_{FinP} ... [_{TP} SUBJECT ...]]]]

... downward Agree with an additional (covert) movement step of the embedded complementizer prior to Agree (Carstens 2016, Diercks and Rao 2019, Diercks et al. 2020)

(3) *Movement + Downward Agree account*

[_{vP} FORCE_[uφ] [_{vP} SUBJECT_[φ] ... [_{ForceP} <Force> ... [_{FinP} ... [_{TP} SUBJ ...]]]]]]

- Whereas Upward Agree accounts make the subject uniformly the target, downward Agree approaches differ in terms of the agreement goal.
 - Direct Agree between (moved) complementizer and matrix subject (Carstens 2016)
 - Complementizer first agrees with an anaphor, which is subsequently bound by the matrix subject (Diercks 2013), cf. also Baker (2008)
 - Complementizer moves to the matrix clause to check anaphoric ϕ -features (Diercks and Rao 2019, Diercks et al. 2020)

2 C-agreement in Kipsigis

2.1 Background on Kipsigis

- Kipsigis is the major variety of Kalenjin, a cluster of dialects of the Southern Nilotic branch of Nilo-Saharan. It is spoken by approximately 2 million speakers in Kenya (Eberhard et al. 2020).

³Outside of Africa, a similar phenomenon has been reported for the Trans-New Guinean language *Teiwa* (Sauerland et al. 2020).

- The language is pro-drop, and it has VSO word order (Bossi and Diercks 2019) and a marked nominative case system (Toweett 1979, Kouneli 2019).⁴
- Unless otherwise indicated, data in this handout come from original fieldwork.

2.2 The pattern: prefixal agreement

- The Kipsigis complementizer consists of the root of the lexical verb *le* ‘say’ and a person/number agreement prefix.⁵

(4) a. â:-ŋgén â:-lé Ø-rú-è Kíbê:t.
 1SG-know.IPFV 1SG-LE 3-sleep-IPFV Kibeet.NOM
 ‘I know that Kibeet is sleeping.’

b. Kà-ó-mwá ò:-lé Ø-rú-è Kíbê:t.
 PST-2PL-say 2PL-LE 3-sleep-IPFV Kibeet.NOM
 ‘You(pl) said that Kibeet is sleeping.’

- (5) **Agreement prefixes on *le***
 (=subjunctive subject prefixes for verbs of conjugation Class I)⁶

	SG	PL
1	â:-	kè:-
2	ì:-	ò:-
3		kò-
imp		kè:-

- Diercks and Rao (2019) argue that the Kipsigis complementizer can only agree with the matrix subject.
- We do indeed find upwards-oriented agreement with the matrix subject with verbs from a variety of lexical classes (e.g. *ja:n* ‘to believe’, *mwa* ‘to say’, *rua:tit* ‘to dream’, *ta:m* ‘to falsely accuse’, *neret:f* ‘to be angry (about)’).

(6) α:-bwa:t-i â:-lé kà-Ø-tʃó:r Kíbê:t rabɪ:nɪk.
 1SG-think-IPFV 1SG-LE PST-3-steal Kibeet.NOM money
 ‘I think that Kibeet stole the money.’

- It is clear from our data, however, that the complementizer may agree with non-subject DPs in the matrix clause, a possibility that is not fully explored in Diercks and Rao (2019).

⁴See König (2006, 2008), Handschuh (2014) for the typology of these systems and Baker (2015), van Urk (2015) for generative analyses.

⁵Diercks and Rao (2019) also report a non-agreeing form of the complementizer, but our speakers find this form ungrammatical. It is possible that there is dialectal (or speaker) variation, and we focus here on the uses of the agreeing form.

⁶The 1SG inflection is exceptional: it has a short vowel in the subjunctive of lexical verbs, but a long one for *le*. This is probably a lexical idiosyncrasy of the verb, which shows some irregularity in inflection elsewhere as well (e.g. Aspect).

- Agreement with the source of information reported in the embedded clause:

(7) Kà-∅-kás-ε:n-**m** **Kíplànggàt** **kò-lé/ì-lé** kà-∅-tʃó:r
 PST-3-hear-APPL-2SG Kiplangat.NOM 3-LE/2SG-LE PST-3-steal
 Kíbê:t rabı:nı:k.
 Kibeet.NOM money
 ‘Kiplangat heard from you that Kibeet stole the money.’

- Agreement with applied arguments that can act as a logophoric center:

(8) Ko:-**a**-mwai-te:t-ʃi **Tʃèbê:t** ε:n tu:je:t **ù:lé/kò-lé** kò:-∅-tʃó:r
 PST-1SG-say-IT-APPL Cheebeet at meeting 1SG-LE/3-LE PST-3-steal
 Kíbê:t rabı:nı:k.
 Kibeet.NOM money
 ‘At the meeting, I said on Cheebeet’s behalf that Kibeet stole the money.’

- The verb *wu:t* ‘to forget’ appears in a syntactic frame in which the grammatical subject is invariably 3rd person, and the experiencer is expressed as an indirect object introduced by the applicative.⁷ In this case, *le* agrees with the experiencer-indirect object, and not with the grammatical subject:

(9) Kà-∅-wu:t-u-**an** **a:-le** kò:-∅-kér Kíbê:t kurgε:t.
 PST-3-forget-VENT-1SG 1SG-LE PST-3-close Kibeet.NOM door
 ‘I forgot that Kibeet closed the door.’

- These data point towards logophoricity and we do find further evidence for a logophoric requirement:

- Agreement with inanimate sources is not possible (Charnavel and Sportiche 2016, Charnavel 2020a,b).⁸

(10) a. Ka-**a**-kas-ε:n **Alice** **ù:lé/ko-le** ka-kɔ-it
 PST-1SG-hear-APPL Alice 1SG-LE/3-LE PST-3.PERF-arrive
 là:gô:k.
 children.NOM
 ‘I heard from Alice that the children have arrived.’
 b. Ka-**a**-kas-ε:n **kurgε:t** **ù:lé/*ko-le** ka-kɔ-it
 PST-1SG-hear-APPL door 1SG-LE/3-LE PST-3.PERF-arrive
 là:gô:k.
 children.NOM
 ‘I heard from the door that the children have arrived.’

⁷This type of syntax for the verb ‘forget’ is attested in other languages as well (e.g. it is one of the possible case frames for *olvidarse* ‘to forget’ in Spanish, Rivero 2004).

⁸For some speakers, agreement with DPs denoting the source of information is not only sensitive to animacy, but also to how reliable the source is judged to be by the speaker (Culy 1994, Speas 2004). For example, in a context where Alice in (10-a) is known to be an unreliable person (e.g. someone who lies often), one consultant reports that that 3rd person agreement on *le* is no longer possible. Thanks to Deniz Özyıldız for the idea of investigating agreement with unreliable sources, and for creating the ‘unreliable Alice’ context.

- Agreement with benefactive arguments that cannot act as logophoric centers is not possible.

(11) *K_α-α-kas-ji Kíbê:t kò-lé Ø-jatʃ-e ko-wa Nairobi.
 PST-1SG-hear-APPL Kibeet 3-LE 3-must-IPFV 3-go(.SBJV) Nairobi
 ‘I heard on Kibeet’s behalf that one should go to Nairobi.’

- The complementizer may also display impersonal agreement, with the form being morphologically identical to the impersonal form of lexical verbs in the subjunctive.⁹

(12) Kí:-ŋgèn kè:-lé Ø-rú-è Kíbê:t.
 1PL-know.IMP IMP-LE 3-sleep-IPFV Kibeet.NOM
 ‘It is known that Kibeet is sleeping.’

- For all of our speakers, impersonal agreement on the complementizer is also available for a wide range of fully inflected lexical verbs in the matrix clause.
- If the impersonal form of the complementizer is used, a hearsay or rumour interpretation arises.

(13) Kà-Ø-kás Kíplàngàt kè:-lé kà-Ø-tʃó:r Kíbê:t rabɪ:nɪk.
 PST-3-hear Kiplangat.NOM IMP-LE PST-3-steal Kibeet.NOM money
 ‘Kiplangat heard that Kibeet stole the money.’ (Kiplangat heard a rumour that Kibeet stole the money, but he does not know with certainty whether this is true.)

(14) Ko:-α-rua:tit kè:-lé kà-Ø-tʃó:r Kíbê:t rabɪ:nɪk.
 PST-1SG-dream IMP-LE PST-3-steal Kibeet.NOM money
 ‘I dreamed that Kibeet stole the money.’ (In my dream, Kibeet stole the money, but this was a rumour that I could not confirm with certainty in the dream)

- A form of *le* (morphologically) identical to the impersonal is used with content nominals:

(15) [lɔgɔjwɛ:k **ke:-le**/***ko-le** ko:-Ø-kirtun Tʃé:bê:t] ko ko:-Ø-jaj Kíbê:t
 news KEE-LE/*3-LE PST-3-marry Cheebeet.NOM TOP PST-3-do Kibeet
 ko-ma-bajbaj.
 ADV-NEG-happy
 ‘The news that Cheebeet got married made Kibeet unhappy.’

Interim conclusion:

The Kipsigis complementizer consists of the root *le* ‘say’ and an agreement prefix that tracks the logophoric center.

⁹The impersonal construction in Kipsigis is syntactically active. Morphologically, it is expressed by combining a first-person plural subject agreement prefix with 3rd person tonal melody. In the subjunctive of CV verbs (such as *le*) there is no tonal difference between 1/2nd and 3rd person forms.

2.3 The pattern: suffixal agreement

- Diercks and Rao (2019) report a pattern of what they call *object agreement*, where the complementizer (optionally) agrees with the indirect object of the matrix verb (the examples are all from speech verbs).

(16) ko-a-mwaa-un a-le-ndʒin ko-Ø-it tuya amut
 PST-1SG-tell-2SG.OBJ 1SG-C-2SG.OBJ PST-3-arrive cows yesterday
 ‘I DID tell you (sg) that the cows arrived yesterday.’ (Diercks and Rao 2019: ex.3, p.371)

- In this case, the prefix on the complementizer tracks subject agreement, while the suffix tracks object agreement.
- We prefer the term *suffixal agreement* for this pattern because there are two types of object agreement: prefixal object agreement (for objects that act as the logophoric center) and suffixal object agreement (for indirect objects of speech verbs mostly).

3 The say-based complementizer is a verb

Main claim:

The Kipsigis agreeing complementizer is not a complementizer, but a lexical verb (*le* ‘say’).

Even though say-based complementizers have been linked to verbal properties before (e.g. Grimshaw 2015, Bondarenko 2020), analyses of these complementizers as elements of category V, and not C, have been sporadic in the literature (e.g. Koopman 1984, Koopman and Sportiche 1989, Kinyalolo 1993, Knyazev 2016, Özyıldız et al. 2018, Demirok et al. 2020, Major and Torrence 2020).

3.1 *le* can be a matrix verb

- The verb *le* ‘say’ can act as a matrix verb. Crucially, the “complementizer” is ungrammatical in this case.

(17) kà-Ø-lé Kíbê:t (*kò-lé) Ø-rú-è là:kwè:t.
 PST-3-LE Kibeet.NOM (*3-LE) 3-sleep-IPFV child.NOM
 ‘Kibeet said that the child is sleeping.’

- The word order of the language is VSO, which makes it clear that *le* is in the position of the verb here.

3.2 *le* is inflected in the subjunctive mood

- Diercks and Rao (2019) and Diercks et al. (2020) argue that when *le* ‘say’ is used as a matrix verb, it is not base-generated in the matrix clause.
 - the complementizer raises to the matrix clause, where the main verb is a silent speech verb.

- Their analysis, however, cannot account for the following observation:
 - **The verb *le* ‘say’ is inflected in the indicative mood when used as a matrix verb, but in the subjunctive when used as a “complementizer”.**
- Kipsigis distinguishes between indicative and subjunctive mood for all lexical verbs (Toweett 1979, Creider and Creider 1989).
 - while various tense and aspect distinctions are made in the indicative, only two forms are distinguished in the subjunctive : the perfective and imperfective.
 - the language lacks infinitives and the subjunctive is used in all subordinate clauses (reflected in the descriptive terminology: *subjunctive* for Creider and Creider 1989 and *governed verb form* for Toweett 1979).

(18) a. Kì:- kí -rú.
 PST-1PL-sleep(.IND)
 ‘We slept.’

b. Kí-mátʃ-é kè: -rú.
 1PL-want-IPFV 1PL-sleep(.SBJV)
 ‘We want to sleep.’

(19) a. Kì:- kí -lé kì:-∅-tʃó:r Kíbê:t rabɪ:nɪk.
 PST-1PL-LE PST-3-steal Kibeet.NOM money
 ‘We said that Kibeet stole the money.’

b. Kì:-kí-mwá kè: -lé kì:-∅-tʃó:r Kíbê:t rabɪ:nɪk.
 PST-1PL-say 1PL-LE PST-3-steal Kibeet.NOM money
 ‘We said that Kibeet stole the money.’

- for 3rd person subjects, the prefix is ∅ in most cells of the paradigm, while it is always *ko-* in the subjunctive.
- The mood inflection follows naturally if *le* is a verb:
 - indicative when used in the root clause
 - subjunctive when it is embedded under a matrix verb (in verbal complementation)

3.3 *Le* can inflect for Aspect

- *le* can inflect for Aspect even when used in complementation contexts (as a reminder, verbs in the subjunctive only make a perfective vs. imperfective distinction).

(20) Ká-a-mwá-e á:-le/á:-le:ɪn ká-∅-tʃó:r Kíbê:t rabɪ:nɪk.
 PST-1SG-say-IPFV 1SG-LE/1SG-LE.IPFV PST-3-steal Kibeet.NOM money
 ‘I was saying that Kibeet stole the money.’

3.4 Applicative and reflexive morphology on *le*

- Remember the suffixal agreement pattern reported by Diercks and Rao (2019):

(21) ko- α -mwaa-un α -le-**nd ζ in** ko- \emptyset -it tuy α amut
 PST-1SG-tell-2SG.OBJ 1SG-C-2SG.OBJ PST-3-arrive cows yesterday
 ‘I DID tell you (sg) that the cows arrived yesterday.’ (Diercks and Rao 2019: ex.3, p.371)

(22) Suffixal agreement (Diercks and Rao 2019: 381)

	SG	PL
1	-le-nd ζ - α n	-le-nd ζ - ϵ tʃ
2	-le-nd ζ -in	-le-nd ζ - $\text{ɔ}:\gamma$
3	-le-nd ζ -i	

- We observe that all forms share not only *le*, but also a [nd ζ] consonant sequence. This indicates the possibility that there is a hidden morpheme present between *le* and the person/number suffixal agreement.
- We argue here that this is indeed the case, with the forms reported in (22) being decomposable into an allomorph of *le* – *le:n* –, followed by the applicative suffix *-tʃi*, followed by the regular object clitics in the language. We give an analysis in the Appendix (see also Driemel and Kouneli 2020).
- Regular phonological processes (e.g. voicing of obstruents after nasals and vowel coalescence rules; Kouneli 2019: Chapter 2) give the surface forms that we see in (22).¹⁰

(23) Suffixal agreement decomposed into APPL and object clitics

	SG	PL
1	-le:n-tʃi- α n (le:nd ζ α :n)	-le:n-tʃi- ϵ tʃ(le:nd ζ ϵ :tʃ)
2	-le:n-tʃi-in (le:nd ζ i:n)	-le:n-tʃi- α :k (le:nd ζ α :k)
3	-le:n-tʃi (le:nd ζ i)	

- The morphemes making up the forms in (23) are independently attested in the language:
 - The suffix *-tʃi* is the most common applicative morpheme (Toweett 1979, Rottland 1982, Creider and Creider 1989), used to introduce applied arguments with a variety of thematic roles (e.g. recipient, beneficiary).^{11, 12}

¹⁰Our [ATR] and vowel length transcriptions are slightly different from those in Diercks and Rao (2019). Their [ATR] transcriptions possibly contain typos, since they display mismatches in the [ATR] values of vowels within a single word, which is prohibited in Kipsigis: the language has a well-studied system of dominant [ATR] vowel harmony (Hall et al. 1974, Halle and Vergnaud 1981, Baković 2000, Nevins 2010).

¹¹There is another applicative suffix *-e:n*, which is mostly used for sources and instruments (Toweett 1979, Rottland 1982).

¹²The applicative *-tʃi* has an allomorph *- \acute{c} i* when attached to verbs ending in an alveolar obstruent. It also has the allomorph *-u* for 1/2 person applied arguments for most (but not all) lexical verbs. This has been analyzed as a specialized use of the ventive suffix *-u* in Kalenjin/Southern Nilotic languages (Rottland 1982, Creider and Creider 1989, Zwarts 2004, Mietzner 2009).

- The object clitics that we have postulated are the regular object clitics in the language (Toweett 1979: p.209).
 - We make the claim that *le* has an allomorph *le:n* (see Zwarts 2004 for similar allomorphs for the cognate word in the Kalenjin dialect Endo).
- Reflexive morphology can also appear on *le*:¹³

(24) ki-ke:r-e-kɛ:

1PL-look-IPFV-REFL

‘We are looking at ourselves/at each other.’

(25) Ko:-∅-tʃɑ:m-tʃi-kɛ: Kibê:t ko-le:n-tʃi-kɛ: ŋâ:m.

PST-3-whisper-APPL-REFL Kibeet.NOM 3-LE-APPL-REFL clever

‘Kibeet whispered to himself that he’s intelligent.’

- **The presence of applicative and reflexive/reciprocal morphology on *le* (even when it is used as a complementizer) strongly supports its analysis as a verb.**

4 Analysis

We adopt an eventuality-based framework where the relation between the attitude holder and the proposition is mediated by contentful eventualities.

Contentful eventualities

- Content nouns like *theory*, *belief*, and *rumour* do not take clausal arguments, rather *that*-clauses adjoin to such nouns (Stowell 1981, Grimshaw 1990, Kayne 2010, Sportiche 2016).
- *that*-clauses constitute predicates with propositional content, which undergo predicate modification with content nouns (Kratzer 2006, 2013, Moulton 2009, 2015).
- In order to get from individuals to their content, Kratzer introduces a content function CONT which if applied to an individual returns a set of possible worlds.

(26) a. The [_{NP} theory [_{CP} that pigs fly]] actually has a lot of support.

b. [[theory THAT pigs fly]] = $\lambda x_e [theory(x) \wedge CONT(x) = \{w : pigs\ fly\ at\ w\}]$

\rightsquigarrow set of individuals such that they are a theory
the content of which is that pigs fly at *w*

- CPs can also denote sets of contentful eventualities (Kratzer 2013, Elliott 2016, 2017, Moulton 2019, Özyıldız et al. 2018, Demirok et al. 2020, Bondarenko 2020).
- These CPs are of type $\langle v, t \rangle$ and are able to combine with attitude predicates via predicate modification (assumption: external argument introduced via Voice making the attitude predicate of type $\langle v, t \rangle$).

¹³The suffix *-kɛ:* is unique in being outside of the [ATR] harmony domain of the verb.

- (27) a. Emma believes Jane to be clever.
 b. $\llbracket \text{believes Jane to be clever} \rrbracket$
 $= \lambda e_v[\text{believe}(e) \wedge \text{CONT}(e) = \{w : \text{Jane is clever at } w\}]$
 \rightsquigarrow set of eventualities such that they are a belief the content of which is that Jane is clever at w

- We analyze *le*-clauses as sets of contentful eventualities but take the obligatory subjunctive of *le* to be responsible for combining *le*-clauses with the matrix predicate.

4.1 The status of covert subjects

In section 2.2, we have given evidence for a logophoric requirement on the antecedents of agreement with *le*. Since *le* is a verb, it will introduce its own local subject. We now provide four arguments in favour of a *pro* analysis of this subject.

1. Analyzing the covert subject as an anaphor predicts *Anaphor Agreement Effects* (Rizzi 1989, Woolford 1999, Sundaresan 2016, Murugesan 2020), contrary to fact

↪ Kipsigis seems to display an AAE strategy in line with *anaphoric* agreement (Woolford 1999:264): complementary distribution of cliticization vs. reflexivization via ϕ -invariant verbal suffix *-ke:*

- (28) K α - α -ke:r(*-an)-ke: / K α - α -ke:r-ke:(*-an)
 PST-1SG-SEE-1SG-REFL / PST-1SG-SEE-REFL-1SG
 ‘I saw myself.’

2. No c-command: *-le* agrees with the source even if the source is embedded in a PP

- (29) K α -i-kas [PP kobun Kiplàngàt] kè:l-**lé**/ **kò-lé**/ ì:l-**lé** kà- \emptyset -tʃó:r
 PST-2SG-hear from Kiplangat IMP-LE/ 3-LE/ 2SG-LE PST-3-steal
 Kìbê:t rabi:ník.
 Kibeet.NOM money
 ‘You heard from Kiplangat that Kibeet stole the money.’

3. No c-command: *-le* can sometimes agree with a discourse antecedent (see also the analysis for *kè:l-**lé*** in (40))

- (30) *Context: We are having an argument about who stole the money. **You** have presented convincing arguments that it is Kibeet who stole the money, and I say to **you**:*

- α -ja:n-i **ì:l-**lé**** kà- \emptyset -tʃó:r Kìbê:t rabi:ník.
 1SG-believe-IPFV 2SG-LE PST-3-steal Kibeet.NOM money
 ‘I believe you that Kibeet stole the money.’

- (31) *Context: You are an investigative journalist and you have one **informant**. No one knows your **informant** but the people you talk to (incl. your editor) know you only get your information from **him**. So, you go to your editor and you say:*

Ka-a-kas **kò-lé** kà-∅-tʃó:r Kíbê:t rabi:nik.
 PST-1SG-hear 3-LE PST-3-steal Kibeet.NOM money
 ‘I heard that Kibeet stole the money.’

4. The subject can be made overt under certain conditions.

- (32) Ka-a-mwa a:-le **ane:** kà-∅-tʃó:r Kíbê:t rabi:nik.
 PST-1SG-say 1SG-LE 1SG PST-3-steal Kibeet.NOM money
 ‘I said that Kibeet stole the money.’

We conclude that the ϕ -morphology seen on *le* results from Agree with *pro*. This pronoun establishes co-reference with a logophoric antecedent in the matrix clause via the assignment function.

- We do not propose that the pronominal subject is bound indirectly by a covert binder which itself is coreferent with the antecedent, in contrast to what is often done for long-distance reflexives (Anand and Hsieh 2005, Anand 2006, Charnavel 2020b) or logophoric pronoun systems (Koopman and Sportiche 1989, Safir 2004, Speas 2004, Anand 2006).
- Instead, we encode the logophoric requirement as a presupposition of *le* itself.

4.2 Prefixal agreement

Main claim:

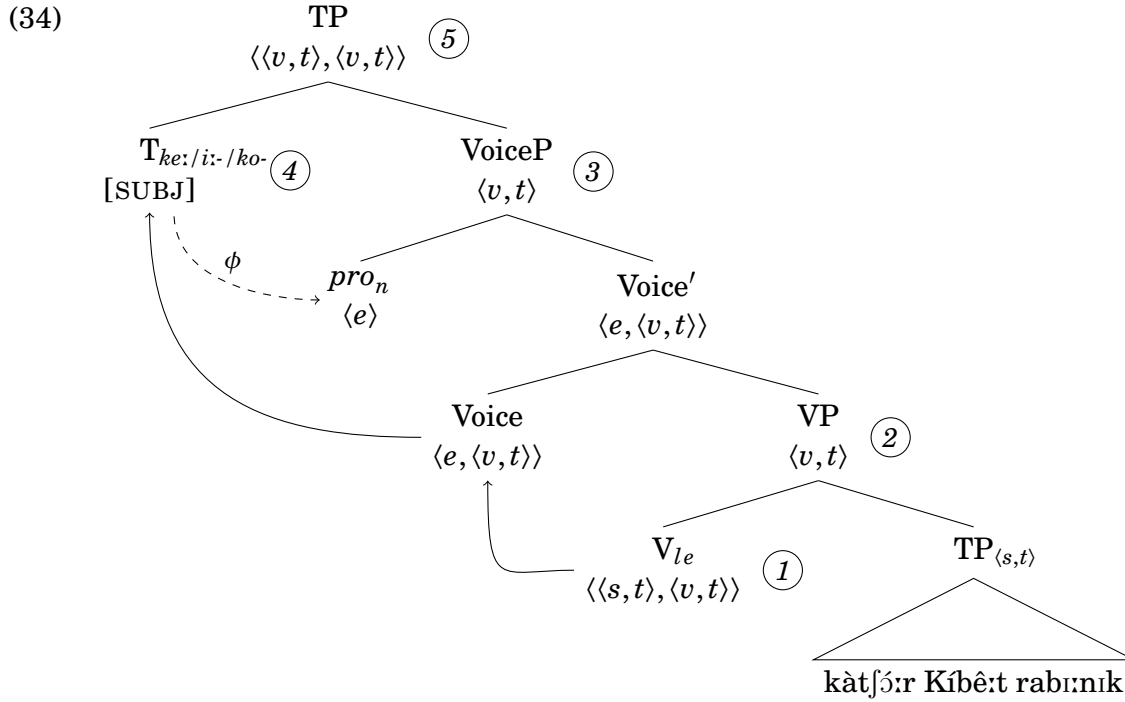
Embedded clauses headed by agreeing forms of *le* constitute sets of contentful eventualities, where the verbal nature of *le* ‘say’ is reflected in its semantics.

Assumptions:

- Agreeing *le* is not a complementizer but a verbal category, introducing an eventuality and the content argument, and presupposing that the agent of the eventuality is the logophoric SOURCE (Sells 1987).
- Voice introduces the external argument (Kratzer 1996) and combines with its complement via *Event Identification* (same for Appl).
- V moves via Voice to T (or a higher projection, see Bossi and Diercks (2019)); T agrees downward with the logophoric subject.
- The subject is a free pronoun with its own set of ϕ -features serving as a goal for agreement with T.
- Subjunctive is introduced in T and serves as a causal linker between the saying event and the event introduced by the matrix predicate, see Özyıldız et al. (2018).

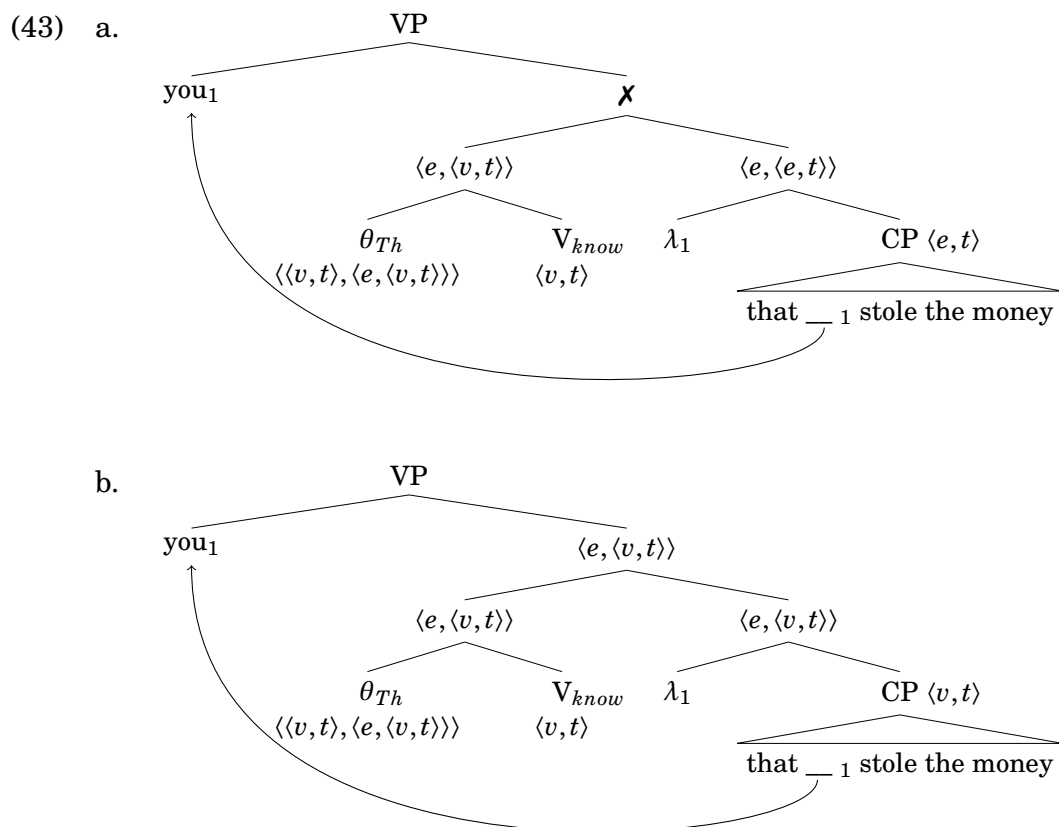
We now provide the structure for:

- (33) [TP Ka-i-kas-ε:n Kiplàngàt [TP ke:-le/ i:-le/ ko-le kà-Ø-tʃó:r
 PST-2SG-hear-APPL Kiplangat IMP-LE/ 2SG-LE/ 3-LE PST-3-steal
 Kíbê:t rabı:nı̀k]]
 Kibeet.NOM money
 ‘You heard from Kiplangat that Kibeet stole the money.’



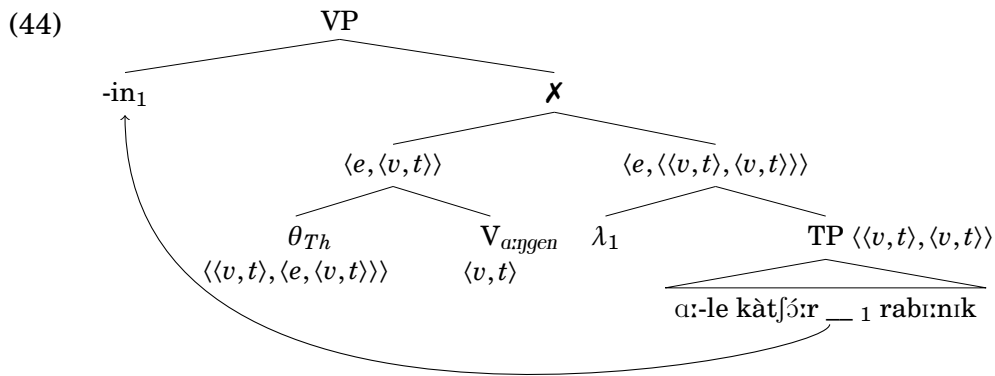
- (35) [(1)]^{w,g} = $\lambda p_{\langle s, t \rangle} \lambda e_v [say(e) \wedge CONT(e) = p]$,
 defined iff AG(e) qualifies as the logophoric SOURCE of p
 [(2)]^{w,g} = $\lambda e_v [say(e) \wedge CONT(e) = \{w : \text{Kibeet stole the money at } w\}]$
 [(3)]^{w,g} = $\lambda e_v [say(e) \wedge CONT(e) = \{w : \text{Kibeet stole the money at } w\} \wedge AG(e) = g(n)]$
 [(4)]^{w,g} = $\lambda P \lambda Q \lambda e'' . \exists e' [e' \sim e'' \wedge P(e') \wedge Q(e'')]$
 [(5)]^{w,g} = $\lambda Q \lambda e'' . \exists e' [e' \sim e'' \wedge say(e') \wedge CONT(e') = \{w : \text{Kibeet stole the money at } w\}$
 $\wedge AG(e') = g(n) \wedge Q(e'')]$, defined iff AG(e')
 qualifies as the logophoric SOURCE of $\{w : \text{Kibeet stole the money at } w\}$

- Bondarenko (2020):
 - All arguments are introduced by θ -heads including the theme (Lohndal 2014, Elliott 2016, 2017). In hyperraising scenarios, this θ_{Th} -head shifts the matrix verb from $\langle v, t \rangle$ to $\langle e, \langle v, t \rangle \rangle$ and merges the raised DP into Spec,VP.
 - The movement trace creates abstraction, which happens, per assumption, at the edge of CP. For $\langle v, t \rangle$ -type CPs, this creates a function of the same type as matrix $V + \theta_{Th}$. The CP and the complex matrix verb $V + \theta_{Th}$ combine via *Generalized Conjunction* (Partee and Rooth 1983).
 - For $\langle e, t \rangle$ -type CPs, abstraction at the CP edge leads to a type clash: A semantic object of type $\langle e, \langle e, t \rangle \rangle$ does not combine with matrix $V + \theta_{Th}$.¹⁵



- Based on the semantics we have given for the subjunctive in Kipsigis only the account proposed by Moulton (2015, 2019) predicts hyperraising to be an option. Bondarenko (2020) predicts a type clash for *le*-complementation, due to abstraction over the subjunctive.

¹⁵For $\langle e, t \rangle$ -type CPs to combine with matrix verbs in non-raising scenarios, a dedicated θ -head θ_{Cont} is introduced. Matrix V combined with θ_{Cont} is of type $\langle \langle e, t \rangle, \langle v, t \rangle \rangle$ and thus compatible with $\langle e, t \rangle$ -type CPs.



- Preliminary data from raising diagnostics applied to Kipsigis seem more compatible with accounts that do not involve movement from inside the embedded clause (e.g. base generation accounts such as prolepsis or control, or a version of an analysis along the lines of Yoon 2007), but further diagnostics are needed for conclusive evidence (obligatory *de re* readings, reconstruction for scope etc.).
- If indeed hyperraising is not attested in Kipsigis, Bondarenko (2020) can account for this restriction without further assumptions, but Moulton (2015, 2019) would need an independent (possibly syntactic) mechanism to rule it out (e.g. Chomsky 2001, Carstens and Diercks 2013, Halpert 2016, 2019, Deal 2017).
- So far we have identified 4 potential hyperraising predicates that take a *le*-complement: *ɲgen* ‘to know’, *ja:n* ‘to believe’, *ta:m* ‘to falsely accuse’, *maŋ* ‘to expect’. We illustrate with *ja:n* ‘to believe’.

Diagnostics applied to *ja:n* ‘believe’

- Idioms that involve the subject lose the idiomatic interpretation when the subject appears in the matrix, which argues against raising (e.g. Davies 2005, Halpert and Zeller 2015, Zyman 2017, Fong 2019):

- (45) a. $\alpha:ja:n-i$ [$\alpha:le$ $ma-\emptyset-si:r-e$ **kiplekwa** $keme:j$ $\alpha:en$].
 1SG-believe-IPFV 1SG-LE NEG-3-pass-IPFV hare.NOM droughts two
 ‘I believe that you cannot fool someone multiple times.’ (lit: I know that a hare cannot exceed two dry seasons)
- b. $\alpha:ja:n-i$ **kiplekwa₁** [$\alpha:le$ $ma-\emptyset-si:r-e$ $_1$ $keme:j$ $\alpha:en$].
 1SG-believe-IPFV hare 1SG-LE NEG-3-pass-IPFV droughts
 two
 ‘I believe that a hare cannot exceed two dry seasons.’
 # ‘I believe that you cannot fool someone multiple times.’

- An overt pronoun matching the raised element is possible in the embedded clause, which points against raising (e.g. Davies 2005, Zyman 2017, Fong 2019), and possibly towards prolepsis (see Salzmann 2017 for an overview).

- (46) a. α :ja:n-i [α:le ka-∅-tʃɔ:r **Kíbê:t** rab:nɪk].
 1SG-believe-IPFV 1SG-LE PST-3-steal Kibeet.NOM money
 ‘I believe that Kibeet stole the money.’
 b. α :ja:n-i **Kíbê:t_i** [α:le ka-∅-tʃɔ:r (**ine:ndet_i**) rab:nɪk].
 1SG-believe-IPFV Kibeet 1SG-LE PST-3-steal 3SG.NOM money
 ‘I believe that Kibeet stole the money.’

- Raising of non-subject DPs (e.g. a benefactive argument) is possible, which argues against raising (e.g. Davies 2005, Zyman 2017, Fong 2019).¹⁶

- (47) a. α :ja:n-i [α:le ko:-∅-til-tʃi **Tʃè:bê:t** **Kíbê:t**
 1SG-believe-IPFV 1SG-LE PST-3-cut-APPL Cheebeet Kibeet.NOM
 pè:ndá].
 meat
 ‘I believe that Kibeet cut the meat for Cheebeet.’
 b. α :ja:n-i **Kíbê:t₁** [α:le ko:-∅-til-tʃi **Tʃè:bê:t** **— 1**
 1SG-believe-IPFV Kibeet 1SG-LE PST-3-cut-APPL Cheebeet
 pè:ndá].
 meat
 ‘I believe that Kibeet cut the meat for Cheebeet.’
 c. α :ja:n-i **Tʃè:bê:t₁** [α:le ko:-∅-til-tʃi **— 1** **Kíbê:t**
 1SG-believe-IPFV Cheebeet 1SG-LE PST-3-cut-APPL Kibeet.NOM
 pè:ndá].
 meat
 ‘I believe that Kibeet cut the meat for Cheebeet.’

- Island diagnostics run so far were inconclusive, with speakers reporting conflicting judgments for extraction out of a complex DP, for example.

- (48) α :ja:n-i **la:kwa:-nɪ_i** [α:le ko:-∅-me [_{DP} ɲo:kta ne
 1SG-believe-IPFV child-this 1SG-LE PST-3-die dog REL.SG
 ko:-∅-tʃam-e (**ineendet_i**)].
 PST-3-like 3SG.NOM
 ‘I believe the child that the dog he/she likes died.’

6 Conclusion and Outlook

- We have argued that the Kipsigis “complementizer” is in fact a verb, and C-agreement is logophoric agreement between a verb and its local subject.
- This analysis resolves the problems for locality and directionality of Agree posed by the upwards-oriented C-agreement pattern.
- “say”-based complementizers could be lexical verbs in more languages than previously thought; see also work on *Abe* (Koopman and Sportiche 1989), *Turkish* (Özyıldız et al. 2018), *Laz* (Demirok et al. 2020), and *Avatime* (Major and Torrence 2020).

¹⁶There are some restrictions: raising of benefactive and instrument indirect objects is possible, but direct objects cannot raise (see also Davies 2005 for similar restrictions in other languages).

- Reported cases of complementizer agreement might not always reflect agreement with an element of category C.
- Patterns of upwards-oriented complementizer agreement don't necessarily require Upward Agree.
- Our analysis suggests an interesting avenue for further research, where the semantic type of the embedded proposition is reflected in the syntactic category of the embedder.
- We have briefly explored the relationship between $\langle v, t \rangle$ -type complementation and hyperraising in Kipsigis, but there is no conclusive evidence yet; this is a topic for further research.

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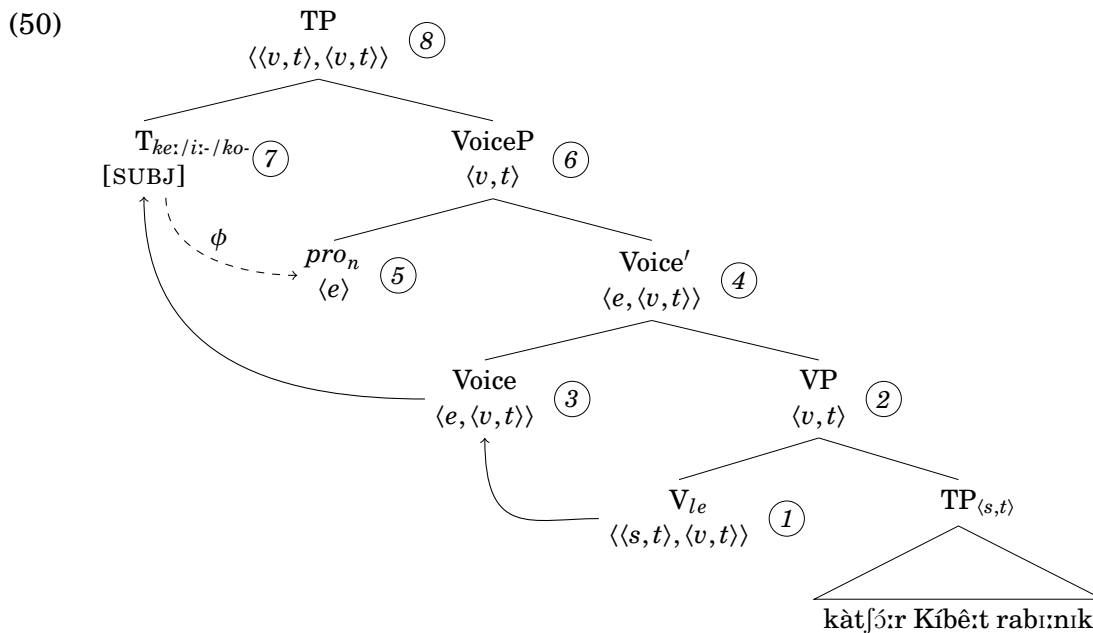
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Appendix

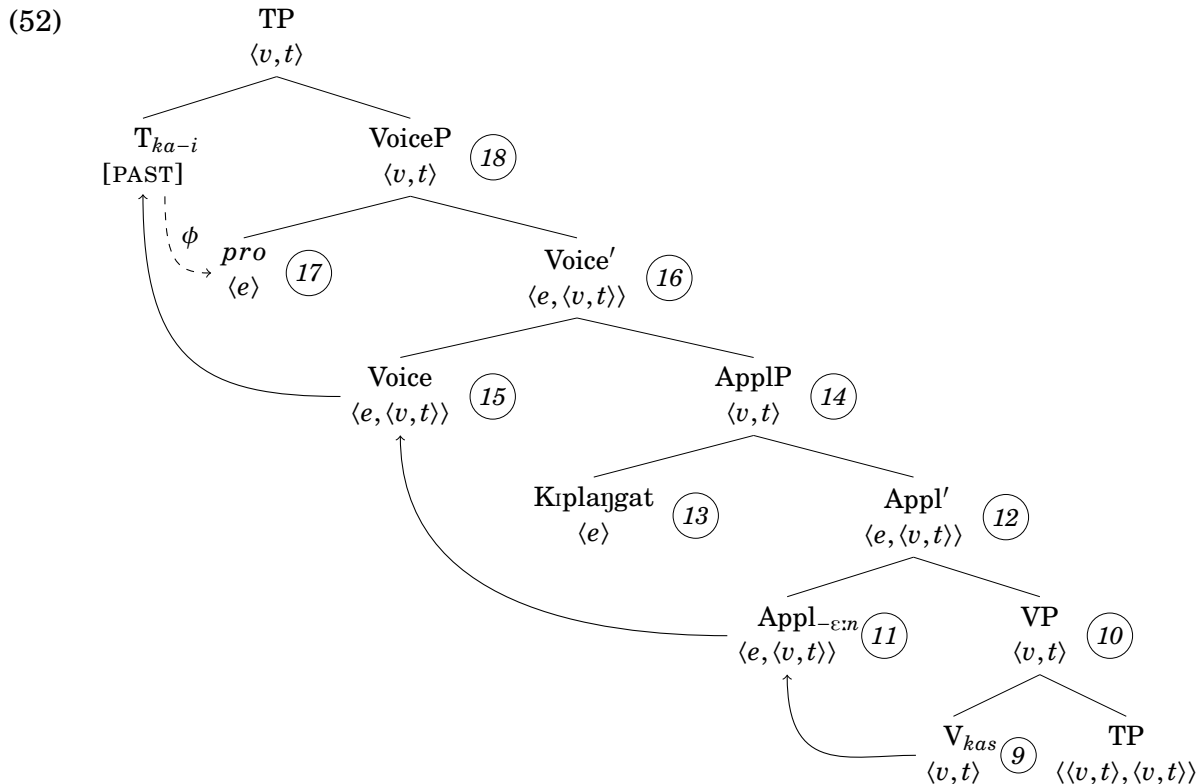
Prefixal agreement (complete derivation)

- (49) Ka-i-kas-εἰn Kìplàngàt ke:le/ i:le/ ko-le kà-Ø-tʃó:r Kíbê:t
 PST-2SG-hear-APPL Kiplangat IMP-LE/ 2SG-LE/ 3-LE PST-3-steal Kibeet.NOM
 rabı:nık.
 money
 ‘You heard from Kiplangat that Kibeet stole the money.’



- (51) $\llbracket \textcircled{1} \rrbracket^{w,g} = \lambda p_{\langle s,t \rangle} \lambda e_v [\text{say}(e) \wedge \text{CONT}(e) = p]$,
 defined iff AG(e) qualifies as the logophoric SOURCE of p
 $\llbracket \textcircled{2} \rrbracket^{w,g} = \lambda e_v [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kibeet stole the money at } w\}]$
 $\llbracket \textcircled{3} \rrbracket^{w,g} = \lambda x_e \lambda e_v [\text{AG}(e) = x]$

- $\llbracket \textcircled{4} \rrbracket^{w,g} = \lambda x_e \lambda e_v [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e) = x]$
 $\llbracket \textcircled{5} \rrbracket^{w,g} = g(n)$
 $\llbracket \textcircled{6} \rrbracket^{w,g} = \lambda e_v [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e) = g(n)]$
 $\llbracket \textcircled{7} \rrbracket^{w,g} = \lambda P \lambda Q \lambda e'' . \exists e' [e' \sim e'' \wedge P(e') \wedge Q(e'')]$
 $\llbracket \textcircled{8} \rrbracket^{w,g} = \lambda Q \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e') = g(n) \wedge Q(e'')]$, defined iff $\text{AG}(e')$
 qualifies as the logophoric SOURCE of $\{w : \text{Kibeet stole the money at } w\}$



- (53)
- $\llbracket \textcircled{9} \rrbracket^{w,g} = \lambda e_v [\text{hear}(e)]$
 $\llbracket \textcircled{10} \rrbracket^{w,g} = \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e') = g(n) \wedge \text{hear}(e'')]$
 $\llbracket \textcircled{11} \rrbracket^{w,g} = \lambda x_e \lambda e_v [\text{SOURCE}(e) = x]$
 $\llbracket \textcircled{12} \rrbracket^{w,g} = \lambda x \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e') = g(n) \wedge \text{hear}(e'') \wedge \text{SOURCE}(e'') = x]$
 $\llbracket \textcircled{13} \rrbracket^{w,g} = \text{Kiplangat}$
 $\llbracket \textcircled{14} \rrbracket^{w,g} = \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e') = g(n) \wedge \text{hear}(e'') \wedge \text{SOURCE}(e'') = \text{kiplangat}]$
 $\llbracket \textcircled{15} \rrbracket^{w,g} = \lambda x_e \lambda e_v [\text{EXP}(e) = x]$
 $\llbracket \textcircled{16} \rrbracket^{w,g} = \lambda x \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kibeet stole the money at } w\} \wedge \text{AG}(e') = g(n) \wedge \text{hear}(e'') \wedge \text{SOURCE}(e'') = \text{kiplangat} \wedge \text{EXP}(e'') = x]$
 $\llbracket \textcircled{17} \rrbracket^{w,g} = g(i)$, defined iff $g(i)$ is addressee¹⁷
 $\llbracket \textcircled{18} \rrbracket^{w,g} = \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kibeet stole the money at } w\}$

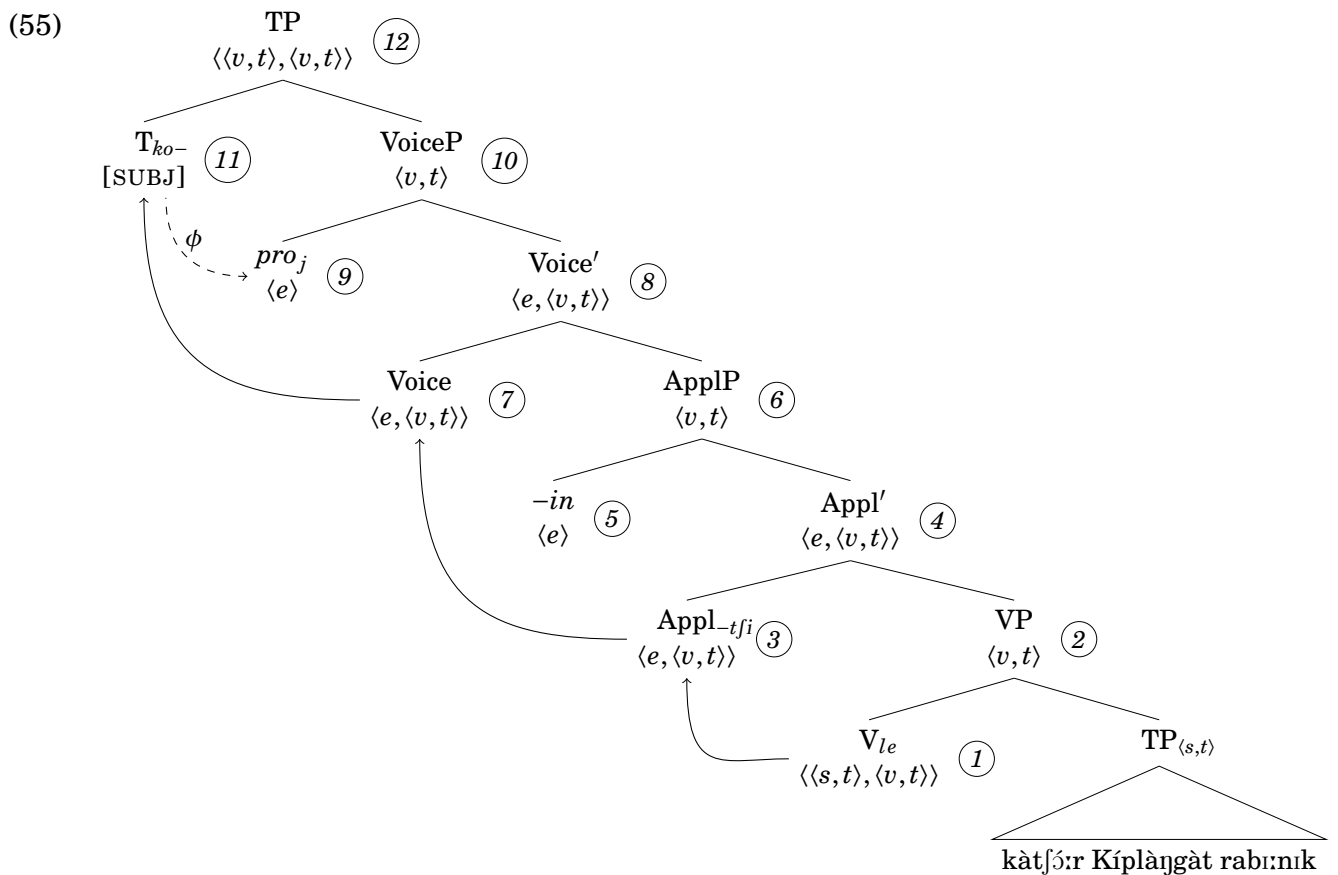
¹⁷ ϕ -features on pronouns denote partial identity functions of type $\langle e, e \rangle$ (Sauerland 2003, 2008, Heim 2008); for free pronouns the relevant assignment is given by the utterance context.

$\wedge \text{AG}(e') = g(n) \wedge \text{hear}(e'') \wedge \text{SOURCE}(e'') = \text{kiplangat} \wedge \text{EXP}(e'') = g(i)$,
 defined iff $g(i)$ is addressee and $\text{AG}(e')$ qualifies as the logophoric SOURCE
 of $\{w : \text{Kibeet stole the money at } w\}$

Suffixal agreement

The occurrence of suffixal agreement is predicted under an account that treats *le* as a verb. In such cases *le* introduces an applied argument in addition to a subject.

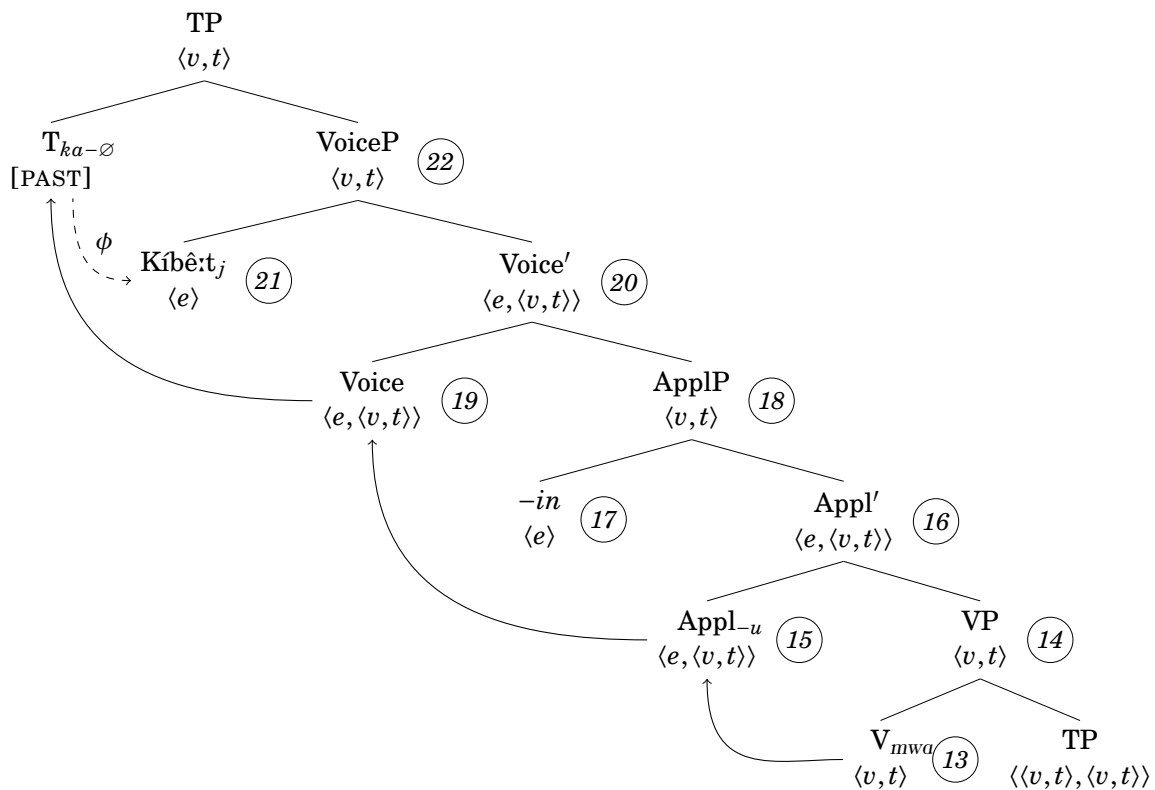
- (54) **Ka-mwa-u-in** Kíbê:t ko-le:n-**tji-in** ka-tʃɔ:r Kíplàngàt
 PST-say-VENT-2SG Kibeet.NOM 3-LE-APPL-2SG PST-steal Kiplangat.NOM
 rabı:nık.
 money
 ‘Kibeet told you that Kiplangat stole the money.’



- (56) [(1)] $^{w,g} = \lambda p_{\langle s, t \rangle} \lambda e_v [\text{say}(e) \wedge \text{CONT}(e) = p]$,
 defined iff $\text{AG}(e)$ qualifies as the logophoric SOURCE of p
 [(2)] $^{w,g} = \lambda e_v [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kiplangat stole the money at } w\}]$
 [(3)] $^{w,g} = \lambda x_e \lambda e_v [\text{GOAL}(e) = x]$
 [(4)] $^{w,g} = \lambda x \lambda e [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kiplangat stole the money at } w\}]$
 $\wedge \text{GOAL}(e) = x]$
 [(5)] $^{w,g} = g(i)$, defined iff $g(i)$ is addressee
 [(6)] $^{w,g} = \lambda e [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kiplangat stole the money at } w\}]$
 $\wedge \text{GOAL}(e) = g(i)]$
 [(7)] $^{w,g} = \lambda x_e \lambda e_v [\text{AG}(e) = x]$

- [[(8)]] $^{w,g} = \lambda x \lambda e [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e) = g(i) \wedge \text{AG}(e) = x]$
- [[(9)]] $^{w,g} = g(j)$
- [[(10)]] $^{w,g} = \lambda e [\text{say}(e) \wedge \text{CONT}(e) = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e) = g(i) \wedge \text{AG}(e) = g(j)]$
- [[(11)]] $^{w,g} = \lambda P \lambda Q \lambda e'' . \exists e' [e' \sim e'' \wedge P(e') \wedge Q(e'')]$
- [[(12)]] $^{w,g} = \lambda Q \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e') = g(i) \wedge \text{AG}(e') = g(j) \wedge Q(e'')]$,
defined iff $g(i)$ is addressee and $\text{AG}(e')$ qualifies as the logophoric SOURCE of $\{w : \text{Kiplangat stole the money at } w\}$

(57)



- (58) [[(13)]] $^{w,g} = \lambda e_v [\text{tell}(e)]$
- [[(14)]] $^{w,g} = \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e') = g(i) \wedge \text{AG}(e') = g(j) \wedge \text{tell}(e'')]$
- [[(15)]] $^{w,g} = \lambda x_e \lambda e_v [\text{GOAL}(e) = x]$
- [[(16)]] $^{w,g} = \lambda x \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e') = g(i) \wedge \text{AG}(e') = g(j) \wedge \text{tell}(e'') \wedge \text{GOAL}(e'') = x]$
- [[(17)]] $^{w,g} = g(i)$, defined iff $g(i)$ is addressee
- [[(18)]] $^{w,g} = \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e') = g(i) \wedge \text{AG}(e') = g(j) \wedge \text{tell}(e'') \wedge \text{GOAL}(e'') = g(i)]$
- [[(19)]] $^{w,g} = \lambda x_e \lambda e_v [\text{GOAL}(e) = x]$
- [[(20)]] $^{w,g} = \lambda x \lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kiplangat stole the money at } w\} \wedge \text{GOAL}(e') = g(i) \wedge \text{AG}(e') = g(j) \wedge \text{tell}(e'') \wedge \text{GOAL}(e'') = g(i) \wedge \text{AG}(e'') = x]$
- [[(21)]] $^{w,g} = \text{Kibet}_j$

[(22)]^{w,g} = $\lambda e'' . \exists e' [e' \sim e'' \wedge \text{say}(e') \wedge \text{CONT}(e') = \{w : \text{Kiplangat stole the money at } w\}$
 $\wedge \text{GOAL}(e') = g(i) \wedge \text{AG}(e') = g(j) \wedge \text{tell}(e'') \wedge \text{GOAL}(e'') = g(i) \wedge \text{AG}(e'') = \text{Kibet}]$,
 defined iff $g(i)$ is addressee and $\text{AG}(e')$ qualifies as the logophoric SOURCE
 of $\{w : \text{Kiplangat stole the money at } w\}$

Supportive evidence comes from the fact that for some matrix verbs some speakers allow applied arguments to be interpreted by *le* exclusively, without being present on the matrix verb. Such a verb is *no:ɲ* ‘complain’ (but also *si:r* ‘write’).

(59) **Ko:**-a-**no:ɲ** a:-**le:n-tʃi** **Kibe:t** ko:-ja:tʃ-e:n àmitwá:gík.
 PST-1SG-complain 1SG-LE-APPL Kibeet PST-bad-PL food.NOM
 ‘I complained to Kibeet that the food was bad.’