

Evidence from Oromo on the typology of complementation strategies

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Abstract. This paper explores the clausal complementation strategies found in Oromo (Cushitic). Recent work by Wurmbrand and Lohninger (2019) suggests that languages distinguish three broad semantic categories of complement clauses, which are hierarchically ordered with respect to their syntactic complexity. Based on newly elicited data and examples from the literature, I propose that Oromo complement clauses also show this three-way split, lending support to Wurmbrand and Lohninger’s (2019) proposal. However, the distribution of clausal complement categories appears to diverge somewhat from what has been reported for other languages, suggesting some flexibility in the way certain states and events can be linguistically encoded. Situating Oromo within the typology of clausal complementation thus sheds light on the diversity of ways in which basic semantic building blocks may be incorporated into the expression of complex meanings and speaks to the import of understudied languages to typological research.

Keywords. Oromo; complementation; typology; syntax-semantics interface; clause domains

1. Introduction. Both within and across languages, complement clauses show ample variety in their syntactic and semantic complexity, as well as in their degree of integration with and dependence on the embedding clause. In his typological study of clausal complementation, Givón (1980) establishes a correspondence between the semantics of the embedding verb on the one hand¹ and the morphosyntactic coding of the complement clause on the other, deriving the hierarchy shown in Figure 1. As indicated by the bottom scale, the further left in the hierarchy, the greater the complexity and independence of the complement clause. It is important to note that this hierarchy is *implicational*, such that the presence or absence of a particular property within the complements of one verb class entails the presence or absence of that property in complements that are higher or lower in the hierarchy. For example, if one kind of complement clause includes the tense/aspect morphology characteristic of main clauses, then all the complements that are more left in the hierarchy will likewise include that morphology, whereas if a kind of complement lacks tense/aspect morphology, then all the complements that are more right in the hierarchy will also lack that morphology.

Building on this view, Wurmbrand and Lohninger (2019) motivate three broad semantic categories of clausal complements that comprise supersets of Givón’s distinctions (see Figure 1). Adopting the terminology and definitions of Ramchand and Svenonius (2014), they label these categories as Propositions, Situations, and Events. *Propositions* commonly appear alongside weak and strong epistemic verbs like *say* and *know*. They may include discourse-linking parame-

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¹ More specifically, verbs are ordered according to the strength of the “influence exerted over the agent of the complement clause by the agent of the main-clause verb” (Givón 1980:335): the further right in the scale, the stronger the influence. Givón refers to this ordering as the Binding Hierarchy.

- (1) Gammachuu-n {roob-aa jir-Ø-a} jedh-Ø-e.
 Gammachu-NOM {rain-CVB be-3ms-IPFV} say-3ms-PFV
 ‘Gammachu said that it is raining.’
- (2) a. Gammachuu-n {Dachaasaa-n raf-aa jiraacc-uu=saa}-tti aman-Ø-a.
 Gam.-NOM {Dach.-NOM sleep-CVB be-NMZ =3msPOSS}-LOC believe-3ms-IPFV
 ‘Gammachu believes that Dachaasa is sleeping.’
 b. Gammachuu-n {akka Dachaasaa-n raf-aa jir-Ø-u}-tti aman-Ø-a.
 Gam.-NOM {as Dach.-NOM sleep-CVB be-3ms-DEP}-LOC believe-3ms-IPFV
 ‘Gammachu believes that Dachaasa is sleeping.’
- (3) Harar Oromo (Owens 1985:154(79))
 {kitaaba baracc-uu} eegal-an-(i).
 {book read-NMZ} begin-3p-(PFV)
 ‘They began to study the book.’

The distribution of complement types in Oromo is consistent with the implicational hierarchy captured in Figure 1. Interestingly, though, the three-way split of embedding verbs falls along somewhat different fault lines than those reported for the languages considered in Wurmbrand and Lohninger (2019). In particular, Propositions are found only with speech verbs (Givón’s weak epistemics, see (1)), whereas strong epistemics (see (2)) appear alongside Situations, thus patterning with emotive and strong attempt verbs (see Bryant and Bhadra to appear). Situating Oromo within the typology of clausal complementation thus sheds light on the diversity of ways in which basic semantic building blocks may be incorporated into the expression of complex meanings and speaks to the import of understudied languages to typological research.

Section 2 introduces additional details regarding Wurmbrand and Lohninger’s (2019) complementation model. Section 3 discusses clausal complementation in Oromo: I will walk through of some key syntactic, semantic, and distributional properties for each of the four complementation strategies shown in (1)-(3), and I will show how these data line up with the complementation model put forth in Wurmbrand and Lohninger (2019). I conclude in Section 4.

2. Background. Wurmbrand and Lohninger (2019) demonstrate in several languages⁵ that complement clauses fall into three broad categories by examining properties that distinguish between different types of complements within a language. For example, it is shown for Serbian that three categories emerge from the distribution of infinitives and overt subjects: as shown in Table 1, Situation and Event complements can be non-finite while Proposition complements cannot, and Proposition and Situation complements allow overt subjects while Event complements do not.

Serbian	Proposition	Situation	Event
Infinitival complement	*	✓	✓
Overt subject	✓	✓	*

Table 1. Properties distinguishing complement categories in Serbian (see Table 5 in Wurmbrand and Lohninger (2019)).

⁴ The basic word order found in Oromo is head-final in the verbal domain and head-initial in the nominal domain. Surface word order is further determined by discourse factors like topicality and salience (see Clamons et al. 1993 for relevant discussion), as evidenced by the word order variation captured in some of the examples in this paper.

⁵ Namely: Greek, Bulgarian, Buryat, Serbian, Croatian, Bosnian, Slovenian, Romanian, English, Italian, Czech, and Brazilian Portuguese.

Table 1 highlights the fact that for both properties, Propositions and Events show opposite values, while Situations pattern somewhere in between. As Wurmbrand and Lohninger (2019: 5) observe, this pattern is predicted by the implicational hierarchy in Figure 1: “Overt subjects are a property of independence, hence least available in the most dependent Event class. Infinitives are a dependent property, hence least available in the Proposition class.”

Wurmbrand and Lohninger (2019) propose that the hierarchical ordering of the categories captured in Table 1 derives from the relationship between the semantic objects to which they correspond. According to Ramchand and Svenonius (2014), the three major clausal domains—the C-domain, T-domain, and V-domain⁶—correspond to three distinct sorts of entities—Propositions, Situations, and Events, respectively—which are related to one another through containment relations mirrored in the syntax: Proposition descriptions are built from Situation descriptions, which are built from Event descriptions.⁷ Extending this view to complement clauses, Wurmbrand and Lohninger (2019) argue that complement categories are distinguished by the minimum structure they contain. Propositions minimally extend into the C-domain. Situations minimally extend into the T-domain, but unlike Propositions, they may lack projections belonging to the C-domain. Finally, Events minimally extend into the V-domain and may lack projections of the T-domain and C-domain. From this, the implicational nature of the complementation hierarchy falls out: because Propositions necessarily contain projections of the C-domain, they must also contain projections belonging to the T-domain and, hence, must be more complex than Situations. Parallel reasoning applies to Situations as compared to Events.

The minimal syntactic structure associated with the three complement categories is shown in Table 2, along with their relative complexity and degree of independence. Though some languages may not distinguish between all three categories regarding certain morphosyntactic properties, while others encode even finer-grained distinctions within categories, Wurmbrand and Lohninger (2019) propose that the implicational complementation hierarchy captured in Table 2 applies universally.

	Proposition	Situation	Event
Minimal syntactic domain	C-domain	T-domain	V-domain
Complexity	most complex	intermediate	least complex
Independence	most independent	intermediate	least independent

Table 2. Correspondence between clause category and syntactic complexity.

In addition to motivating a three-way split for complements, Wurmbrand and Lohninger (2019) also suggest a *synthesis model* of complementation. According to this model, verbs do not select for complements of certain syntactic categories; rather, the distribution of clausal complements is constrained by the semantic requirements of the verb. This correctly allows for optionality in syntactic coding, for instance, complements that appear larger than expected under a strict syntax-semantics mapping (see Section 3.2). It also allows some flexibility in complementation, predicting the meaning shifts observed for verbs that can occur with more than one complement type, exemplified in English in (4a) vs. (4b).

⁶ Various other labels have been applied to the three clausal domains; see Table 14 of Wurmbrand and Lohninger (2019) for examples. Wurmbrand and Lohninger (2019) distinguish the domains in terms of the kinds of projections they contain: the highest domain includes operator projections, the middle domain includes tense/aspect and agreement projections, and the lowest domain includes theta projections.

⁷ I refer the reader to Ramchand and Svenonius (2014) for further details regarding the semantic side of the framework, which will not be directly relevant to the present work.

- (4) a. Sue forgot that she finished the problem set.
 b. Sue forgot to finish the problem set.

3. Oromo complementation. With the details of Wurmbrand and Lohninger's (2019) proposal in place, I now turn to clausal complementation in Oromo. As shown in (1)-(3), repeated in (5)-(7), Oromo shows four kinds complement clauses: *full finite clauses* (5), *verbal nominalization with subject* (6a), *embedding under akka 'as'* (6b), and *verbal nominalization without subject* (7).

- (5) Gammachuu-n {roob-aa jir-Ø-a} jedh-Ø-e.
 Gammachu-NOM {rain-CVB be-3ms-IPFV} say-3ms-PFV
 'Gammachu said that it is raining.'
- (6) a. Gammachuu-n {Dachaasaa-n raf-aa jiraacc-uu=saa}-tti aman-Ø-a.
 Gam.-NOM {Dach.-NOM sleep-CVB be-NMZ =3msPOSS}-LOC believe-3ms-IPFV
 'Gammachu believes that Dachaasa is sleeping.'
- b. Gammachuu-n {akka Dachaasaa-n raf-aa jir-Ø-u}-tti aman-Ø-a.
 Gam.-NOM {as Dach.-NOM sleep-CVB be-3ms-DEP}-LOC believe-3ms-IPFV
 'Gammachu believes that Dachaasa is sleeping.'
- (7) Harar Oromo (Owens 1985:154(79))
 {kitaaba baracc-uu} eegal-an-(i).
 {book read-NMZ} begin-3p-(PFV)
 'They began to study the book.'

In the subsections that follow, we will see that these embedding strategies vary with respect to a number of morphosyntactic properties, including finiteness, temporal orientation, embedded predicate type, and subject realization. These properties together suggest that Oromo complement clauses comprise three distinct complement categories, ordered according to their minimum syntactic complexity. Further, the distribution of these categories in Oromo coheres with the hierarchy in Figure 1, and the flexibility found for some verbs is in line with a synthesis model of complementation. However, I will argue that Situation complements appear with a wider array of verbs in Oromo than in the languages discussed in Wurmbrand and Lohninger (2019).

The strategies shown in (5)-(7) will be discussed in turn in Sections 3.1, 3.2, and 3.3. The overall picture will be summarized in Section 3.4.

3.1. FULL FINITE CLAUSES. This section treats complement clauses that appear alongside speech verbs like *jedh-* 'say', as in (5) above and (8)-(9) below. These complements are finite: the embedded verb is inflected for subject agreement and aspect, which are encoded with the same morphology found in matrix clauses. They are temporally unrestricted, permitting past, present, and future orientations. They are also unrestricted in the kind of predicate they can contain, allowing both verbal predicates as in (5) and (8), and non-verbal predicates as in (9).

- (8) Harar Oromo (Owens 1985:148(62c))
 {isaan dhuf-an-(i)} je'-Ø-e.
 {3p-NOM come-3p-(PFV)} say-3ms-PFV
 'He said that they came.'
- (9) a. ani {Caaltuu-n jaamtu=dha} jedh-Ø-e.
 1s {Caaltu-NOM blind.F=COP₁} say-1s-PFV
 'I said that Caaltu is blind.'
- b. Caaltuu-n jet-te-tti {isee-n jaamtu=dha}
 Caaltu-NOM say-3fs-PFV {3fs-NOM blind.F=COP₁}
 'Caaltu said that she(=Caaltu) is blind'⁸

In addition to appearing in speech reports, clauses of this type also appear with nouns like *dhaamsa* ‘message’, with which they express the informational content, as shown in (10).⁹

- (10) (Nigussie 2007:62(28))
 {dhall-i namaa [...] alaaluma-tti of haa eegg-at-uu}-n
 {offspring-NOM man.GEN [...] far-LOC self let keep-MID-DEP}-NOM
 dhaamsa=koo =ti
 message=1sPOSS=COP₂
 ‘it is my message that humans be careful [...].’

Interestingly, this type of complement is incompatible with verbs that do not implicate a speech event, including strong epistemic verbs like *aman-* ‘believe’, as in (11).

- (11) * Gammachuu-n {roob-aa jir-Ø-a} aman-Ø-a
 Gammachu-NOM {rain-CVB be-3ms-IPFV} believe-3ms-IPFV
 Intended: ‘Gammachuu believes that it is raining.’

This may raise the question of whether this sort of complement isn’t simply quotation. Notice in (9b), however, that pronouns do not necessarily shift in speech complements, allowing coreference between *Caaltu* and embedded *isheen*. Shifting does occur in direct quotes, as in (12).

- (12) Harar Oromo (Owens 1985:148(62a))
 {isii-n dhuf-t-e} jet-t-e.
 {3fs-NOM come-3fs-PFV} say-3fs-PFV
 ‘‘She₁ came,’’ she₂ said. (she₁ ≠ she₂)’

Further, *wh*-elements embedded in speech complements can receive matrix scope, as in (13).

- (13) Wollega Oromo (G. Ricciardi, unpublished)¹⁰
 Dachaasaa-n {Gammachuu-n ija mukkaa **isakam** nyaat-Ø-e} jedh-Ø-e?
 Dachaasa-NOM {Gammachu-NOM fruit tree.GEN **which** eat-3ms-PFV} say-3ms-PFV
 ‘Which fruit did Dachaasa say that Gammachu ate?’

Finally, on the distinction between direct quotes and what he calls ‘‘indirect quotes,’’ Owens (1985:148) observes in Harar Oromo that the former permit tonal patterns that are otherwise confined to independent clauses, whereas the latter (including the example in (8)) do not.

⁸ In (9b) the complement clause follows the matrix verb. This word order has also been elicited with *akka* clauses (i) and verbal nominalizations without subjects (ii). Such word order variation will not be relevant to the present work.

- (i) Dachaasaa-n aman-Ø-a {akka Caaltuu-n raf-aa jir-t-u}.
 Dachaasa-NOM believe-3ms-IPFV {as Caaltu-NOM sleep-CVB be-3fs-DEP}
 ‘Dachaasa believes that Caaltu is sleeping.’
 (ii) Dachaasaa-n yaal-aa jir-Ø-a {raf-uu}-f
 Dachaasa-NOM try-CVB be-3ms-IPFV {sleep-NMZ}-DAT
 ‘Dachaasa is trying to sleep.’

⁹ Notice that the embedded clause in (10) includes the jussive morpheme *haa* ‘let.’ Owens (1985) reports that this morpheme is restricted to independent clauses in Harar Oromo; however, Nigussie (2007) does not indicate direct quotation in the paraphrase. (The variety of Oromo captured in (10) is not specified in the cited work.)

¹⁰ This example was elicited in person from one adult native speaker of Wollega Oromo at Harvard University as part of coursework for Ling 117r: Linguistic Field Methods (Spring 2018).

Additional work is necessary to diagnose the quotational status of Oromo speech complements.¹¹ If it is correct that they are not strictly direct quotation, then based on their close similarity with matrix clauses—including their finiteness, temporal independence, and free predicate embedding—we may conclude that Oromo speech verb complements are categorically Propositions, minimally extending into the C-domain.

3.2. VERBAL NOMINALIZATIONS WITH SUBJECTS AND *AKKA* CLAUSES. This section treats the embedding strategies exemplified in (6a) and (6b), verbal nominalization with subjects (henceforth, VNS) and embedding under *akka* ‘as’. As captured in (6) and in (14) below, these two embedding strategies appear with the same sorts of verbs and contribute the same sort of meaning—what we would expect under the synthesis model for embedding strategies that belong to a common clausal category.

- (14) a. Harar Oromo (Owens 1985:158(94))
 in-nii {magalaa deem-**uu isa**} feedh-Ø-a.
 3ms-NOM {market go-NMZ **3msPOSS**} want-3ms-IPFV
 ‘He wants to go to the market.’
 b. Wollega Oromo (Baye 1986:111(39b))
 Tulluu-n {Caaltuu-n **akka** dhuf-t-u} barbaad-Ø-a
 Tulluu-NOM {Caaltu-NOM **as** come-3fs-DEP} want-3fs-IPFV
 ‘Tulluu wants Caaltuu to come.’¹²

Contrasting with full finite clauses, which have a rather narrow distribution in Oromo, these clauses occur with several kinds of embedding verbs. One or both strategies are attested with:¹³

- Strong epistemic verbs: (non-factive) *aman-* ‘believe’, *falma-* ‘claim/argue’, *yaad-* ‘think’; (factive) *beek-* ‘know’, *yaadat-* ‘remember’, *mirkanafat-* ‘discover’, *irranfat-* ‘forget’, *gal-* ‘understand’; (perception) *dhaga-* ‘hear’ and *arg-* ‘see’
- Emotive verbs: *abdat-* ‘hope’, *gammadaadha* ‘be happy (that)’, *barbaad-* ‘want’, *fedh-* ‘want’, *eeggadh-* ‘expect’

¹¹ Another property that may distinguish quotational from non-quotational speech complements in Oromo is the licensing of embedded negative polarity items by negation of the matrix verb: as a first pass, notice that negation of the matrix verb in (iii) allows for embedding of *nama kamuu*(=*kamiyyuu*) ‘anyone,’ which elsewhere appears as the object of negated verbs (as in (iv.a) vs. (iv.b)). If *nama kamuu* is truly a negative polarity item, then (iii) would serve as additional evidence that Oromo speech verbs do embed finite complement clauses (not just direct quotations).

- (iii) Gammachuu-n {Dachaasaa-n nama **kamuu** quunam-Ø-e} hin-jen-n-e
 Gammachu-NOM {Dachaasa-NOM person **any** meet-3ms-PFV} NEG-say-NEG-PFV
 ‘Gammachu didn’t say that Dachaasa met anyone.’
 (iv) a. Gammachuu-n nama **kamuu** hin-quunam-n-e
 Gammachu-NOM person **any** NEG-meet-3ms-PFV
 ‘Gammachu didn’t meet anyone.’
 b. Gammachuu-n [**nama ta’e**] quunam-Ø-e-era
 Gammachu-NOM **someone** meet-3ms-PFV-AUX
 ‘Gammachu met someone.’

¹² *Akka* ‘as’ can appear anywhere within its constituent clause as long as it precedes the embedded verb.

¹³ This list is based on original data and examples found in Gragg (1976), Owens (1985), Baye (1986), Dubinsky et al. (1988), Nigussie (2007), Alemayehu (2015), and Mazengia (2015). VNS clauses have been elicited or attested with all of the verb types shown except strong attempt verbs and the implicative verb *godh-* ‘make’. All of the verbs shown have been elicited or attested with *akka* clauses.

- Strong attempt verbs: *himm-* ‘tell’, *gaafat-* ‘ask’, *aboom-* ‘command’, *ajaj-* ‘order’
- Other-manipulation implicative verb: *godh-* ‘make/force’

This distribution departs from that observed in Wurmbrand and Lohninger (2019), where strong epistemic verbs are found to occur with Proposition complements. It is interesting to note as well the inclusion of an implicative verb (*godh-* ‘make’) in this set, as implicatives tend to occur with a smaller kind of clause than emotive and strong attempt verbs. Despite these differences, I will propose that the clausal complements of these verbs all belong to a single category: Situations.

Consider first VNS clauses. These clauses are formed by affixation of the nominalizing morpheme *-uu* to a verbal stem (see Owens 1985, Mazengia 2015 for details). They include the complete array of verbal arguments, all of which may be explicit, subject included. As highlighted in (15), they are also compatible with temporal specification distinct from the time of the matrix event. This reveals that VNS clauses minimally include projections belonging to the T-domain. On the other hand, these clauses are non-finite: the nominalized verb is not inflected for subject agreement or aspect. Affixal negation (cf. example (20)) is also unavailable within VNS clauses, and negation must instead be expressed through paraphrasis with a negative lexical verb like *baat-* ‘fail’ (see Mazengia 2015:221-2) or *dhiis-* ‘leave’, as in (16). This suggests that the T-domain contained within VNS clauses is structurally deficient.

- (15) Wollega Oromo (Gragg 1976:193)
 {**bor** wallaggaan deem-uu=saa} beek-n-a.
 {**tomorrow** Wellegga go-NMZ =3msPOSS} know-1p-IPFV
 ‘We know his going to Wellegga tomorrow.’
- (16) Tulama Oromo (Alemayehu 2015:36(38))
 {išee-n deem-uu **dhiis-uu-n** =šee} gaarii=dha.
 {3fs-NOM go-NMZ **leave-NMZ-NOM=3fsPOSS**} good =COP₁
 ‘Her not going is good.’

In the place of verbal inflection we find *-uu*, which licenses a (resumptive) genitive subject.¹⁴ The genitive subject and other nominal features (e.g., nominative case marking in (16)) appear to the right of the nominalizer, consistent with the word order of underived nominals. VNS clauses also show the same distribution as underived nominals, serving as objects (e.g., (15)), subjects (16), and genitive specifiers (17).¹⁵ Note in the latter that the VNS clause supplies the topic of *oduu* ‘news’ rather than its content, contrasting with the contribution of the Proposition to *dhaamsa* ‘message’ in (10).

- (17) Harar Oromo (Mazengia 2015:232)
 oduu-n {leenc’a ajjees-uu Takkaa} dhugaa.
 news-NOM {lion kill-NMZ Tekka.GEN} true
 ‘The news of Tekka’s killing a lion is true.’

¹⁴ The genitive subject is often expressed as a possessive clitic, as in (15) and (16). It may also be expressed as a free-standing possessive pronoun, as in (14a), or a noun in genitive case, as in (17). Baye (1986) and Alemayehu (2015) report that the genitive subject is required, even in the presence of a nominative subject; it is in fact unclear whether the nominative case observed of the embedded subject in e.g. (16) is assigned within the nominalization, or if it is assigned following movement of the embedded subject to the matrix clause.

¹⁵ Mazengia (2015:231) notes of (17) that it is unclear whether the VNS clause is itself marked for genitive case. The absence of genitive marking on the nominalized verb would be consistent with Owens’ (1985:104) observation that non-final possessors (that is, possessors which are possessed) occur in absolutive rather than genitive case form.

These data suggest that Oromo VNS clauses are categorically Situations: they minimally extend into the T-domain, allowing for temporal specification, but they do not constitute full clauses. This conclusion is consistent with the observation made in Wurmbrand and Lohninger (2019) that nominalizations are cross-linguistically more common with Situation complements than with Propositions.¹⁶ But recall that VNS clauses are one of two embedding strategies that appear to fall within this category. We must also consider its counterpart strategy, embedding under *akka*.

At first glance, these two strategies look very different. Like VNS clauses, *akka* clauses include the full array of verbal arguments and are temporally specified. But unlike VNS clauses, *akka* clauses are finite: verbs embedded under *akka* are inflected for aspect and subject agreement, as highlighted in (18) and (19). (Note in (18) that imperfective aspect is expressed with dependent morphology rather than the morphology found in main clauses and speech complements.) *Akka* clauses are also compatible with affixal negation, as in (20).

- (18) {akka Caaltuu-n raf-ti-u} Gammachuu-n himm-Ø-e
 {as Caaltu-NOM sleep-3fs-DEP} Gammachu-NOM tell-3ms-PFV
 ‘Gammachu told Caaltu to sleep.’
- (19) {akka kaleesa roob-Ø-e}-tti-n aman-Ø-a
 {as yesterday rain-3ms-PFV}-LOC-1S believe-1s-IPFV
 ‘I believe it rained yesterday.’
- (20) Wollega Oromo (Baye 1986:205(12))
 Tulluu-n {akka ishii-n hoolaa hin-bin-ne} hin-beek-Ø-a
 Tulluu-NOM {as 3fs-NOM sheep NEG-buy-NEG} IND-know-3ms-IPFV
 ‘Tulluu knows that she did not buy sheep.’

Baye (1986) and Alemayehu (2015) analyze *akka* clauses as CPs, with *akka* serving as a finite complementizer on par with English *that*; Owens (1985) and Mazengia (2015) similarly treat *akka* clauses as descriptively akin to English *that* clauses. However, there are a few properties that distinguish *akka* clauses from the Proposition complements that appear with speech verbs.

First, as mentioned above, *akka* clauses show a comparable distribution and meaning contribution to VNS clauses, signaling that the two embedding strategies contribute the same sort semantic object to the composition. This is in contrast with Propositions, which cannot occur with the verbs with which *akka* clauses are compatible (cf. (11)).¹⁷

Second, *akka* clauses also pattern with VNS clauses in requiring a verbal predicate. As shown in (21) and (22), embedding of the non-verbal copula =*dha* is disallowed, and the verbal

¹⁶ See also Deal (2017), who notes that finite complements are generally taken to be syntactically larger than nonfinite and nominalized complements. Consistent with this view, Deal (2017) reports cross-linguistic evidence that indexical shift, there attributed to operators within the clausal periphery, is permitted only in finite complements.

¹⁷ Strong epistemic verbs like *labs-* ‘announce’ and *dhaga’-* ‘hear’, which otherwise appear with VNS and *akka* clauses, may pair with *jedh-* ‘say’ and its Proposition complement through clause chaining in order to convey the content of what was announced/heard, as shown in (v) and (vi).

- v. Wollega Oromo (Gragg 1982: 414)
 bor yaa’in jir-Ø-a jedhani labsaniru.
 tomorrow meeting be-3ms-IPFV say-3p-PFV announce-3p-PFV
 ‘They have announced that there will be a meeting tomorrow’
- vi. Dachaasaa-n burtukaana nyaat-Ø-ee-ra oduu jet-tu-a Gammachuu-n dhaga’-Ø-ee-ra.
 Dac.-NOM orange eat-3ms-PFV-AUX story say-2p-IPFV Gam.-NOM hear-3ms-PFV-AUX
 ‘Gammachu heard the rumor that Dachaasa ate an orange.’

copula *ta'* - must be used instead. Nonverbal predicates are however permitted in speech complements (cf. (9)), and Owens (1985) shows that they are likewise licensed in relative clauses, as in (23); hence, the unacceptability of (21a) and (22a) does not reflect a general restriction in Oromo. Rather, as argued in Bryant and Bhadra (to appear), the need for a verbal predicate reflects the requirement that the clausal complement specify a Situation—something that non-verbal predication fails to do.

- (21) a. * {jaamaa=**dha**-uu=koo} falma-dh-e.
 b. {jaamaa **ta'**-uu =koo} falma-dh-e.
 {blind.M **be**-NMZ=1sPOSS} claim-1s-PFV
 'I claimed that I am blind (lit. my being blind).'
- (22) a. * {akka Caaltuu-n jaamtu=**dha**]-tti aman-Ø-a.
 b. {akka Caaltuu-n jaamtuu **ta'**-ti-e]-tti aman-Ø-a.
 {as Caaltu-NOM blind.F **be**-3fs-PFV}-LOC believe-1s-IPFV
 'I believe that Caaltuu is blind.'
- (23) Harar Oromo (Owens 1986:131(3))
 namicc-ii {(xan) intal-tii isa bareed-duu} ac jir-Ø-a
 man-NOM {(as) girl-NOM 3msPOSS pretty-F} there be-3ms-IPFV
 'The man whose daughter is pretty is there.'

Third, Baye (1986) reports that only imperfective aspect is permitted under what are there characterized as “desiderative” verbs, for instance *barbaad-* ‘want’, as shown in (24). The example in (25) suggests that imperfective aspect is likewise required with the implicative verb *godh-* ‘make’: here it is found even when the action is understood to be complete by the time of utterance. As noted in Section 1, verb-dependent tense restrictions are characteristic of Situations rather than Propositions.

- (24) Wollega Oromo (Baye 1986:111-2(39b-40))
 a. Tulluu-n {Caaltuu-n akka dhuf-t-u} barbaad-Ø-a
 Tulluu-NOM {Caaltu-NOM as come-3ms-DEP} want-3ms-PFV
 'Tulluu wants Caaltu to come.'
 b. * Tulluu-n {Caaltuu-n akka dhuf-t-e} barbaad-Ø-a
 Tulluu-NOM {Caaltu-NOM as come-3ms-PFV} want-3ms-PFV
- (25) (Dubinsky et al. 1988:494(24b))
 Terfaa-n {akka Gamteessaa-n leenc'a ajjees-Ø-u} godh-Ø-e
 Terfa-NOM {as Gamteessa-NOM lion kill-3ms-DEP} make-3ms-PFV
 'Terfa made Gamtesa kill the lion.'

Finally, outside of complementation contexts, *akka* clauses also have a temporal adverbial function, expressing immediate anteriority as in (26). Assuming the framework of Ramchand and Svenonius (2014), this lends additional support to the idea that *akka* clauses contribute Situations to the semantics, since Situations (rather than Propositions and Events) are characterized in part by their association with a time parameter.^{18,19}

¹⁸ Propositions do include a time parameter by virtue of embedding a Situation, but tense is not a property of Propositions *per se*; see Ramchand and Svenonius (2014:20-21) and Wurmbrand and Lohninger (2019:6-7) on the properties of Propositions. Events do not include a time parameter.

¹⁹ *Akka* also appears in a host of contexts outside of clausal embedding, in all cases carrying a similitive flavor; see Bryant and Bhadra (to appear) for examples and semantic analysis of *akka* as a type-flexible similitive morpheme.

- (26) Wollega Oromo (Baye 1986:60(34b))
 {akka Tulluu-n deem-Ø-ee} Fayyiisaa-n dhuf-Ø-e
 {as Tulluu-NOM go-3ms-PFV} Fayyiisa-NOM come-3ms-PFV
 ‘As (soon as) Tulluu went, Fayyiisaa came.’

The tense and predicate restrictions observed in *akka* clauses, along with the overlapping distribution and meaning contribution with VNS clauses, suggest that *akka* clauses are also categorically Situations. Like VNS clauses, they minimally extend into the T-domain, but they do not require projections of the C-domain.²⁰

Before moving to the final kind of complement clause found in Oromo, it should be noted that while neither VNS clauses nor *akka* clauses appear to obligatorily project a C-domain, they may nevertheless be compatible with some peripheral projections. In particular, both embedding strategies allow embedded *wh*-interpretations, as shown in (27), which may be taken to indicate a *wh*-operator in the periphery of the embedded clause.

- (27) a. Gammachuu-n {sa’a **meeqa** akka ta’-Ø-e} beek-Ø-a.
 Gammachu-NOM {time **how-many** as be-3ms-PFV} know-3ms-IPFV
 ‘Gammachuu knows what time it is.’
 b. Gammachuu-n {sa’a **meeqa** ta’-uu} yaad-at-Ø-a.
 Gammachu-NOM {time **how-many** be-NMZ} think-MID-3ms-IPFV
 ‘Gammachuu knows (lit. remembers) what time it is.’

Importantly, within Wurmbrand and Lohninger’s (2019) synthesis model, mismatches between syntactic structure and semantic category are predicted to be possible: clauses may contain more structure than is necessary for their semantic type, as long as the additional structure does not induce a change in overall meaning. For example, a clause that contains C-domain projections but lacks the operators that form a Proposition from a Situation will map to a Situation in the semantics, just like a clause capping out in the T-domain. Therefore, the inclusion of a *wh*-operator in the complement clauses in (27) does not entail that these clauses comprise Propositions. Additional work is necessary to determine which peripheral projections are compatible with VNS and *akka* clauses.

3.3. VERBAL NOMINALIZATIONS WITHOUT SUBJECTS. This section treats the final clausal complementation strategy found in Oromo, verbal normalization without subjects (henceforth, VN), exemplified in (7), repeated in (28). Like VNS clauses, VN clauses are formed by affixation of the nominalizer *-uu* to a verbal stem. But contrasting with VNS clauses, VN clauses do not allow overt subjects, as shown in (29); rather, the subject of VN clauses must be covert and is obligatorily controlled (Owens 1985, Baye 1986). VN clauses also contrast with VNS clauses in that they are not interchangeable with *akka* clauses, as captured by the contrast in (30).

- (28) Harar Oromo (Owens 1985:154(79))
 {kitaaba baracc-uu} eegal-an-(i).
 {book read-NMZ} begin-3p-(PFV)
 ‘They began to study the book.’

²⁰ While they contribute the same sort of semantic object, VNS clauses and *akka* clauses differ respect to definiteness: VNS clauses are definite in the sense that their referent must be familiar to be felicitous, whereas *akka* clauses impose no restrictions on the discourse in which they occur (see Bryant and Bhadra to appear). These strategies further differ in that *akka* clauses cannot function as subjects, unlike VNS clauses (Baye 1986, Alemayehu 2015).

- (29) Harar Oromo (Owens 1985:157(90))
 {deem-uu (*isa)} did-Ø-e.
 {go-NMZ (*3msPOSS)} refuse-3ms-PFV
 ‘He refused to go.’
- (30) Wollega Oromo (Baye 1986:113(43b,c))
 a. Tulluu-n {wayaa miicc-uu} hin-danda’-Ø-a
 Tulluu-NOM {clothes wash-NMZ} IND-be-able-3ms-IPFV
 ‘Tulluu is able to wash clothes.’
 b. * Tulluu-n {akka wayaa miicc-uu} hin-danda’-Ø-a
 Tulluu-NOM {as clothes wash-DEP} IND-be-able-3ms-IPFV

As the above examples show, VN clauses serve as complements for self-inducement implicative verbs like *eegal-* ‘begin’ and *did-* ‘refuse’ and modal verbs like *danda’-* ‘be able’. They also appear with the other-manipulation implicative verb *dholk-* ‘prevent’, as in (31); notice that in this case the implicit subject of the VN clause is controlled by the matrix object rather than the matrix subject. Beyond complementation contexts, VN clauses have the distribution of underived nominals, serving for instance as subject in sentences like (32).²¹

- (31) Harar Oromo (Owens 1985:159(9))
 niitii {deem-uu} dholk-Ø-e.
 woman {go-NMZ} prevent-3ms-PFV
 ‘He prevented the woman from going.’
- (32) Wollega Oromo (Baye 1986:128(24))
 {horii qab-uu}-n Tulluu hin-gammacc-iis-Ø-a.
 {money have-NMZ}-NOM Tulluu IND-please-CS-3ms-IPFV
 ‘To have/having money pleases Tulluu.’

Whereas the verbs listed above can occur only with VN clauses, some verbs can appear with verbal nominalizations both with and without overt subjects (see Owens 1985, Baye 1986). According to Owens (1985:158), for verbs like *beek-* ‘know’ and *fedh-* ‘want’ the difference is merely emphatic, as shown in (33). But for verbs like *irran fat-* ‘forget’ the choice gives rise to a difference in meaning. When paired with a VNS clause, *irran fat-* expresses a factive attitude, and the complement is interchangeable with an *akka* clause, as shown in (34). But when paired with a nominalization lacking a subject, *irran fat-* instead expresses an unfulfilled intention, as in (35). Under the synthesis model, the meaning shift observed for *irran fat-* is predicted just in case VN clauses and VNS clauses belong to distinct semantic categories.

- (33) Harar Oromo (Owens 1985:158(94))
 a. in-nii {magalaa deem-uu isa} feedh-Ø-a.
 3ms-NOM {market go-NMZ 3msPOSS} want-3ms-IPFV
 ‘He wants to go to the market.’
 b. in-nii {magalaa deem-uu} feedh-Ø-a.
 3ms-NOM {market go-NMZ} want-3ms-IPFV
 ‘He wants to go to the market.’
- (34) Harar Oromo (Owens 1985:158(92))
 a. {kitaaba k’ara’-uu xiyya} =n irran fadh-dh-e.

²¹ On the distribution of VN clauses, see Gragg (1976), Owens (1985), and Baye (1986).

- {book read-NMZ 1sPOSS}=1s forget-1s-PFV
 ‘I forgot that I read the book.’
- b. {akka=n kitaaba k’ara’-Ø-e} irran fad-dh-e.
 {as =1s book read-3ms-PFV} forget-1s-PFV
 ‘I forgot that I read the book.’
- (35) Harar Oromo (Owens 1985:158(93))
 in-nii {foon bit-uu} irran fat-Ø-e.
 3ms-NOM {meat buy-NMZ} forget-3ms-PFV
 ‘He forgot to buy meat.’

Based on the disallowance of an overt subject along with the difference in distribution and meaning contribution from more complex VNS clauses, we may conclude that Oromo VN clauses are categorically Events, only requiring projections of the V-domain.

3.4. SUMMARY. The data above suggest that Oromo complement clauses come in three semantic categories. The first category, *Proposition*, is encoded as full finite clauses and occurs with the speech verb *jedh-* ‘say’. These complements are unrestricted with respect to tense and predicate selection. The second category, *Situation*, is encoded as non-finite VNS clauses and finite *akka* clauses and occurs with strong epistemic, emotive, and strong attempt verbs (as well as the implicative verb *godh-* ‘make’). Though temporally specified, these complements show restricted predicate selection and, with some verbs, restricted tense. The third category, *Event*, is encoded as non-finite VN clauses and occurs with implicative and modal verbs. These complements disallow overt subjects and involve obligatory control.

The three clausal categories and their distinguishing properties are summarized in Table 3. The pattern that emerges coheres with the implicational complementation hierarchy introduced in Section 1: Propositions show the greatest complexity and independence, Events the least, and Situations fall in the middle. While a full comparison of properties that distinguish between clause categories in Oromo remains to be done, the implicational nature of the hierarchy allows us to form predictions for values that are not evidenced in the data above. For example, because VNS clauses disallow affixal negation, we would predict structurally simpler VN clauses to likewise disallow affixal negation. Predicted values are shown in parentheses in Table 3.

Oromo	Proposition	Situation	Event
Temporal specification	+	+	(-)
Overt subject	+	+	-
Aspect/agreement	+	+/-	-
Affixal negation	(+)	+/-	(-)
Non-verbal predicate	+	-	-
Restricted tense value ²²	-	+	(+)

Table 3. Properties distinguishing clausal categories in Oromo, with predicted values in parentheses. Under Situations, ‘+/-’ shows the values for *akka* clauses and VNS clauses, respectively.

²² Recall from Section 3.2 that Situation complements show restricted tense values only under certain verbs. As for Event complements, if it is correct that they do not allow temporal specification, then the tense value associated with the eventuality captured in Event complements is restricted to the tense value associated with the embedding clause; see examples (11) and (12) in Wurmbrand and Lohninger (2019: 9) for illustration.

In light of Wurmbrand and Lohninger (2019), we might also predict Propositions to differ from Situations and Events in Oromo with respect to the allowance of speaker- and discourse-linking parameters, including the availability of an embedded reference time. Future work may also investigate whether Oromo complementation categories may be distinguished by restructuring behavior such as clitic climbing.²³

4. Conclusion. Overall, Oromo clausal complementation appears to support the tripartite implicational hierarchy suggested in Wurmbrand and Lohninger (2019). At the same time, Oromo exhibits a distinct verbal clustering from what is found for the languages discussed in Wurmbrand and Lohninger (2019), with Situations appearing with a wider array of clausal embedding verbs. In particular, Situations are found not only with emotive verbs like *barbaad-* ‘want’ and strong attempt verbs like *himm-* ‘tell’, but also with strong epistemic verbs like *aman-* ‘believe’ and the other-oriented implicative verb *godh-* ‘make.’ Comparison between the distribution of complement categories found in Oromo and the distribution reported in Wurmbrand and Lohninger (2019) is captured in Table 4. It is important to note that the distributional differences suggested here arise only around the edges, such that the overall distribution of complements in Oromo is consistent with the verbal hierarchy shown in Figure 1.

Verb type	Weak epist.	Strong epist.	Emotive	Str. attempt	Implicative
W&L (2019)	Proposition	Proposition	Situation	Situation	Event
Oromo	Proposition	Situation	Situation	Situation	Situation/Event

Table 4. Distribution of complement categories reported in Wurmbrand and Lohninger (2019) compared to the distribution proposed for Oromo.

This is only a first look at clausal complementation in Oromo from a typological perspective, and there remains plenty of work to be done. First, it should be determined how robust the categorical distinctions proposed here really are. A more systematic examination of the properties suggested to distinguish between Propositions, Situations, and Events in Oromo is in order. Second, if the picture proposed here is supported by additional data, it is worth asking why the distribution of complement categories found in Oromo diverges from what has been found in other languages. To answer this question, we need to consider the overall functional inventory that the language makes available. For instance, the appearance of the implicative verb *godh-* ‘make’ with Situations rather than Events may be related to availability of a lexical causativization strategy in Oromo (cf. Owens 1985, Dubinsky et al. 1988). Furthermore, the uniform appearance of Oromo non-speech attitudes with Situations rather than Propositions may follow from the semantics and selectional properties of *akka* ‘as’ along with the compositional strategies available for Oromo direct objects (see Bryant and Bhadra to appear).

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²³ Object clitics are attested for Tulama Oromo in Alemayehu (2015:26).

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