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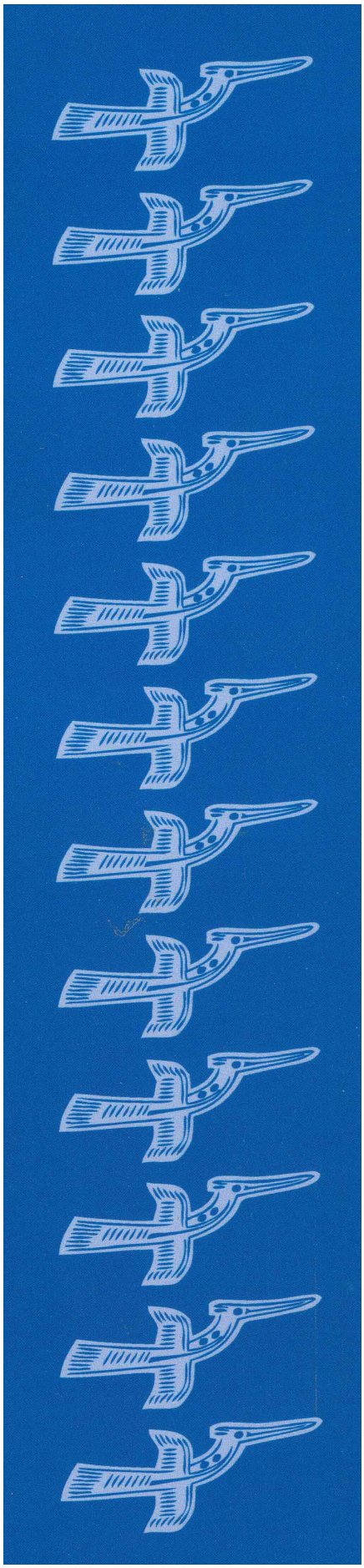

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Complementation in Ho (North Munda)

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Abstract
Evidence to date shows that Ho (North Munda) bears out claims about the isomorphism that appears in nearly all languages between the semantic and syntactic dimensions of complementation (e.g., Givón 2001). In this paper, we will look at the various constructions of a complement-taking matrix verb with a complement in Ho. We see that verbs of saying typically take a fully finite complement, while perception-cognition verbs take some kind of reduced complement such as a nominalization, infinitive or bare verb. [1]
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1. Introduction

Givón hypothesizes that the greater the semantic bond between the two events (as expressed in the matrix and complement verb), the more syntactically integrated the two clauses should be (2001:39-40; cf. Haiman 1985, Noonan 2007:101). A tight semantic bond means that the two events are co-temporal and have co-referential agents. If the two events share agents and time-reference, a fully finite complement verb with tense marking would be redundant (Noonan 2007:111). Instead we expect to see some kind of reduced complement verb, e.g., nominalization or infinitive, where tense, aspect and grammatical relations are primarily marked on the matrix verb.

The complements of perception-cognition-utterance verbs often reference a time that is independent of the time reference of the matrix verb. These complements are therefore the most likely to be finite. In Ho, we will see that two verbs of saying, *men* 'say' and *meta* 'say to', have fully finite complements.

The time reference of complements of modality and manipulation verbs such as 'try' or 'want' is normally the same as that of the matrix verb. They are furthermore more likely to have the same subject. In section 3 we will look at the complements of modality and manipulation verbs in Ho and we will see nominalizations, infinitives and bare verbs.

In the rest of section 1, I will introduce some basic facts about the Ho language, in particular subject and object marking, in order to better understand example sentences.

1.1 Basic clauses in Ho

Ho is an agglutinating language and the word order is predominately SOV, although various NPs do sometimes appear after the verb for discourse functions. It has nominative/accusative alignment throughout the grammar. Both subject and object NPs are traditionally unmarked for grammatical relation. However, there is a type of accusative marker *-ke*, as in (1), which younger speakers are using to a certain degree on animate objects.

(1) *Dobro=do* *seta-ke* *hapa-n-me* *meta-i-ten-e*
Dobro=FOC dog-ACC quiet-RFLX-2SG.IMP say.to-3SG-IPFV-FIN
'Dobro says to his dog, be quiet' (20110222MB:51)

-Ke is a recent borrowing from neighboring Indo-Aryan languages, such as Sadani/Sadri (Osada 1999:53). The use of *-ke* is not frequent in texts but was used often in my elicitation work with young, educated and bilingual students. It is not considered grammatical by older speakers.

[1] Data for this study were collected during three field trips to Jharkhand, India. Funding was provided by Living Tongues Institute for Endangered Languages and the National Geographic Enduring Voices Project and an NSF Dissertation Improvement grant, BCS-1022940. Special thanks to Jitesh Tiriya, Malti Birua, Moti Purty and all of the Ho speakers who contributed to the database. Many thanks also to Doris Payne and an anonymous reviewer for their comments on versions of the paper.

1.2 Subject marking in basic clauses

All personal pronouns in Ho have two forms, a free full form and a short, bound form. Except for the third person singular marker, the pronouns do not change to indicate different grammatical relations or semantic roles.[2] The short forms appear as both object suffixes and subject enclitics, as well as for certain types of possession.

Table 1: Pronouns in Ho

	Full Form			Short form		
	Singular	Dual	Plural	Singular	Dual	Plural
1(inclusive)	*aŋ*	*alaŋ*	*abu*	*-ŋ/-eŋ/-iŋ*	*-laŋ*	*-bu*
(exclusive)		*aliŋ*	*ale*		*-liŋ*	*-le*
2	*am*	*aben*	*ape*	*-m/-me/-em*	*-ben*	*pe*
3	*aeʔ*	*akiŋ*	*ako*	*-eʔ/-i:/-e*	*-kiŋ*	*-ko*

In Ho, the subject NP can be omitted if it is recoverable from the discourse. There is however a pronominal subject clitic that attaches either to the word immediately before the verb as in example (2), and on the word ***naʔ*** 'now' in example (3), or to the end of the verb as in both verbs in example (3). The clitic is the short or bound form (see table 1).

(2) *en dudulum-ko ajaʔ baba ɟawge=**ko** ɟom-e-ja*
that pigeon-PL 3SG:GEN paddy always=3PL eat-INAN.OBJ-FIN
'those pigeons always eat his paddy' (20081107AB:4)

(3) *naʔ=**m** kaɟi-ke-ɖ-a=**m** ɟom-me-ja=**ŋ***
now=2SG say-PFV-TR-FIN=2SG eat-2SG-FIN=1SG
'now you said it, "I'm going to eat you"' (20110210BCc:23)

As we see with the second person singular clitic in example (3), the subject clitic sometimes appears simultaneously before the verb and at the end of it. Anderson et al. suggest that the double marking of subjects happens in "contrastive or expressive discourse" (2008:219). Both the preverbal and postverbal patterns of pronominal subject marking are attested and acceptable to speakers; however the preverbal pattern as in example (2) is more frequent (cf. Anderson et al. 2008:217).

The subject clitic does not appear when the subject is inanimate. There are also instances where an animate subject clitic is omitted, as we see in (4).

(4) *ente aeʔ-o: o:ʔl-eja-n-a*
then 3SG-also go.out-PST-ITR-FIN
'then she went out too' (20110524RPP:86)

The conditions under which animate subject clitics are omitted are not clear, however it seems to be more common with third person singular subjects.

1.3 Transitive verbs and object marking in basic clauses

Transitivity and object marking in Ho are complex. The transitive verb root is followed by a tense/aspect suffix and the transitive suffix *-ɖ* (Anderson et al. 2008; Deeney 2002). If there is a past tense or perfective aspect suffix and if the object is animate, an object suffix agreeing with person and number follows the transitivity suffix. The transitive suffix does not appear in present tense or imperfective clauses. If the verb is the main verb of the clause, there is a finite suffix *-a* (or its allomorph *-e*[3]).

(5) *hola Soba aŋ=eʔ nel-ki-ɖ-iŋ-e*
yesterday Soba 1SG=3SG see-PFV-TR-1SG-FIN
'yesterday Soba saw me/looked at me' (1.67.23)

[2] For the third person singular, -eP is the subject form, while -i: is the object form.

[3] Ho has vowel harmony based on height: mid-vowels become high after high vowels, and [a] raises to /e/ after a high vowel. High vowels do not normally lower.

If the third person object marker *-i:* comes together with the transitive marker *-ɖ*, the result is pronounced as a glottal stop, as in (6).

(6) *cike-te ni esu muruku pẽjae=ko nutum-ki-ʔ-je*
how-all this very foolish weaver=3PL name-PFV-TR:3SG-FIN
'how they named this very foolish weaver' (20110429JoBa:6)

The imperfective aspect marker *-tan* requires a different verb construction than do the other tense/aspect markers. In the *-tan*-construction, the animate object suffix comes immediately after the verb root and before *-tan,* instead of after the aspect marker as in the verb forms with perfective suffixes.

(7) *Soba aŋ=eʔ nel-iŋ-ten-e*
Soba 1sg=3SG see-1SG-IPFV-FIN
'Soba is looking at/seeing me' (1.66.22)

For object marking, animate NPs are marked in the verb:

(8) *kule-ko=ko goeʔ-ko-wa*
tiger-PL=3PL kill-3PL-FIN
'they kill tigers' (201105NTPSc:12)

Now we move to consider what happens if an object is inanimate. In non-past or imperfective clauses with an inanimate object, the bound object suffix is *-e* (or its harmonic equivalent *-i*), as in (9). This is invariable for number, as we see by comparing (9) and (10). Dual and plural marking on the inanimate NP itself is optional.

(9) *Dobro=do en ro: daru nel-e-tan-a*
Dobro=FOC that dry tree see-INAN.OBJ-IPFV-FIN
'Dobro is looking at that tree trunk' (20110222MB:49)

(10) *ako-waʔ gaw-ko gotaʔ-e-tan-a*
3pl-GEN wound-PL scratch-INAN.OBJ-IPFV-FIN
'they are scratching their wounds' (1.200.32)

The inanimate object suffix can also appear with some ostensibly intransitive verbs, such as *nir* 'run', *raʔ* 'cry', *duraŋ* 'sing' when they are in non-past or imperfective clauses i.e., with *-tan* or zero-marking for generic aspect.

(11) *Soba duraŋ-e-tan-a*
Soba sing-INAN.OBJ-IPFV-FIN
'Soba is singing' (1.60.37)

In past and perfective aspect, the inanimate suffix does not appear, as seen in example (12). Only the transitive *-ɖ* is present.

(12) *tisiŋ esu pureʔ ba:-ko akariŋ-ke-ɖ-a*
today very many flower-PL buy-PFV-TR-FIN
'today she sold a lot of flowers' (1.12.26)

Animate recipients and beneficiaries are treated as objects and indexed in the verb with one of the bound pronominal elements from table 1. The verb must take the applicative suffix *-a*.

(13) *en=do en basi manɖi saben tuju-ko em-a-ɖ-ko-wa*
that=FOC that leftover rice all jackal-PL give-APP-TR-3PL-FIN
'then he gave that leftover rice to all the jackals' (20081029RCBb:27)

The applicative suffix appears in the same slot as the perfective aspect suffixes; therefore it cannot co-occur with a perfective aspect suffix. When the transitivity suffix *-ɖ* appears after *-a,* the default interpretation is perfective or past.

2. Finite complements and complementizers

Perception-cognition-utterance matrix verbs tend to have the most finite complement clauses, because of the relative semantic independence of the matrix event from the complement event or situation (Givón 2001:41). We will see that two utterance verbs in Ho, *meta* 'say to' and *men* 'say'

both take finite complements. Two other perception-cognition verbs *nel* ‘see’ and *ada* ‘know’ also take finite complements, which are sometimes introduced with a complementizer.

2.1 meta *and* men

The two most frequent verbs of saying in Ho are *meta* ‘say to’ and *men* ‘say’, which take fully finite direct quote complements. Both are syntactically transitive, taking the transitivity marker in perfective aspects, and an inanimate object marker with *-tan* ‘imperfective’.

With *meta*, the grammatical direct object is the person who is being talked to. In example (14), we see *meta* with the third person animate object marker *-i*.

(14) *“aŋ=do gaɽa-re ɟoka=ŋ oɽa-leː-n-oʔ-wa” meta-i-ten-e*
1SG=FOC river-LOC little=1SG bathe-ANT-ITR-MID-FIN say.to-3SG-IPFV-FIN
“‘I will bathe a little in the river”, he says to him’ (20081108AB:38)

Men ‘say’ is also always syntactically transitive and appears with an inanimate object marker in non-past or imperfective clauses (15) and the transitive suffix *-ɖ* in perfective aspect (16).

(15) *“am bacaw-eŋ-te=ge=m hoba-oʔ-wa” men-e-tan-a*
2SG save-1SG-ALL=EMPH=2SG must-MID-FIN say-INAN.OBJ-IPFV-FIN
“‘you must save me,” he says’ (20110210BCb:33)

(16) *ente miɖ-teʔ “daru=ŋ maʔ-ja nen bugi-leka-n daru” men-ke-ɖ-a*
then one-place tree=1SG chop.w.swinging.motion-FIN this good-like-ITR tree say-PFV-TR-FIN
‘then in one place, “I’ll cut down the tree, this is a good tree”, he said’ (20110210BCc:12)

The complements of both *meta* and *men* are fully finite as we might expect of the complements of utterance verbs. In the complement clauses we see that the complement verb can appear with an aspect marker, and the finite suffix *-a*. There is also a subject clitic.

2.2 The complementizer ci

Two PCU verbs that express epistemic certainty are *nel* ‘see’ and *ada* ‘know’. As with the verbs of speaking, the complements of *nel* ‘see’ and *ada* ‘know’ are also finite. However they differ from the complements of *meta* ‘say to’ and *men* ‘say’ because they are most commonly introduced by the complementizer *ci.*

First, we will look at three examples of *nel* with no complementizer. The first thing to notice is that the word order can vary; the matrix verb with *nel* ‘see’ may precede or follow the complement clause. Although both orders are possible, the order shown in (18) and (19), with the matrix verb preceding the complement, is preferred.

(17) *ente biŋ ondoʔ kaːʔ=kiŋ goeʔ-ka-n-a nel-ke-ɖ-kiŋ-e=ʔ*
then snake and crow=3DL die-PRF-ITR-FIN see-PFV-TR-3DL-FIN=3SG
‘then he saw that the snake and the crow were dead’ (20110521SD:59)

(18) *eneːte=kiŋ nel-ko-tan-a daru sube-re esu sange coke-ko menaʔ-ko-wa*
then=3DL see-3PL-IPFV-FIN tree under-LOC very many frog-PL COP-3PL-FIN
‘then they saw that there were many frogs under the tree’ (20110222MB:54)

(19) *Dobro nel-ko-tan-a=ʔ hon-ko unuŋ-ten-e=ko*
Dobro see-3PL-IPFV-FIN=3SG child-PL play-IPFV-FIN=3PL
‘Dobro is watching the boys playing’ (2.178.10)

The second interesting point about sentences (17)-(19) is that the subject of the complement clause is copied and marked on the matrix verb as the object of *nel* ‘see’. For example, in sentence (17), the object that is marked on *nel* is dual, referring to the snake and the crow, who are the subject of the complement clause. Example (18) has a locative copula construction in the complement clause. The single argument of a locative copula is always marked on the copula verb, close to the root, in the same way that objects are marked. And in sentence (18), it is that single argument of the copula that is copied and marked on the matrix verb.

Complements of *nel* are commonly introduced with the complementizer *ci*. In this case, *nel* always precedes the complement clause, followed by *ci* and the finite complement clause.

(20) *ente canab=do nel-e-tan-a ci en daru=do diriŋ-ten-e*
then after=FOC see-INAN.OBJ-IPFV-FIN COMP that tree=FOC horn-IPFV-FIN
'then, after, he sees that that tree has horns' (20081219JT:51)

(21) *nel-e-tan-a=kiŋ ci bojam-re=do coke ban-gaja?*
see-INAN.OBJ-IPFV-FIN=3DL comp jar-LOC=FOC frog NEG.COP-3SG:FIN
'they see that the frog isn't in the jar' (20081219JT:9)

Note that in both (20) and (21), *nel* has an inanimate object marker, as in the pattern of *men* 'say' above. This fact distinguishes these clauses with *ci* from those without *ci* above (e.g., (18)) where the complement subject was marked as object of *nel* 'see'. In example (21) the complement subject is third person animate; however, the object marker of *nel* 'see' is inanimate. Note though that a sentence with a copied object suffix (for the subject of the complement clause) and *ci* was acceptable to my consultant (22).

(22) *Dobro nel-ke-ɖ-ko-wa ci hon-ko unuŋ-ten-e*
Dobro see-PFV-TR-PL-FIN COMP child-PL play-IPFV-FIN
'Dobro sees that the children are playing' (2.178.15)

Despite the acceptability of a sentence like (22), there are no examples of copied objects with *ci* in the narrative texts in my corpus. Complements of *nel* with *ci* are normally different from those without *ci*. The inanimate object marker in sentences like (20) and (21) most likely encodes the complement clause itself.

Another verb which expresses epistemic certainty and can take complement clauses introduced by *ci* is *ada* 'know'. *Ada* can also mean 'experience, feel' but when it carries the applicative marker *-a* and reflexive *-n*, then it means 'know', as we see in example (23).

(23) *Dobro ada-a-n-a ci am gapa=m huɟu?-we*
Dobro know-APP-RFLX-FIN COMP 2SG tomorrow=2SG come-FIN
'Dobro knows that you're coming tomorrow' (2.179.18)

The complement of *ada* does not always appear with *ci*, as we see in (24) and (25). In the versions without *ci*, we do not see any evidence of the complement clause subject being copied with *ada*.

(24) *ka=kiŋ ada-a-n-a cauli-te manɖi bai-u?-wa*
NEG=3DL know-APP-RFLX-FIN uncooked.rice cooked.rice make-MID-FIN
'they didn't know that food could be make from uncooked rice' (20081029RCBa:14)

(25) *Dobro ada-a-n-a am gapa=m huɟu?-we*
Dobro know-APP-RFLX-FIN 2SG tomorrow=2SG come-FIN
'Dobro knows that you're coming tomorrow' (2.179.19)

In this section we have seen that *nel* 'see' and *ada* 'know' can take finite complements both with and without the complementizer *ci*. The verb in the complement clause is fully inflected: we see aspect suffixes, the transitivity suffix, object markers and the finite suffix *-a*. *Nel* is a transitive verb; the subject of the complement verb is copied as object of *nel* 'see' when there is no complementizer. With the complementizer *ci, nel* 'see' takes an inanimate object marker and the complement subject is not copied. *Ada* appears with the applicative and reflexive suffixes and therefore the complement subject cannot be copied into the object slot, with or without *ci*.

Both with and without *ci,* the complement clause tends to follow both *nel* 'see' and *ada* 'know'. (But see example (17) for an exception to this tendency.) In the following section, we will see the opposite word order with another type of complementizer, *mente*.

2.3. Mente

The complementizer or quotative *mente* comes from *men* 'say' plus the allative/infinitive marker *-te*.[4] In this construction type, a finite complement clause is followed by *mente* and then the matrix verb, the opposite order from what we saw in section 2.2 with *ci*. Matrix verbs that take *mente* include *riːɲ* 'forget' and *uɽuʔ* 'think'.

(26) *"cilika=ɲ budi-re ne-ko nen dudelum-ko=ɲ har-nir-ko-wa mente"*
how=1SG idea-LOC this-PL this pigeon-PL=1SG drive-run-PL-FIN
uɽuʔ-ke-ɖ-a
COMP think-PFV-TR-FIN
' " how can I run these pigeons away?" he thought' (20081107AB:3)

(27) *aɲ kiteb em-a-mi-ja=ɲ mente=ɲ riːɲ-ke-ɖ-a*
1sg book give-APP-2SG-FIN=1SG comp=1SG forget-PFV-TR-FIN
'I forgot to give you the book' (2.15.49)

(28) *aɲ liɟeʔ=eɲ haka-ja=ɲ mente=ɲ riːɲ-ke-ɖ-a*
1sg clothing=1SG hang-fin=1SG comp=1SG forget-PFV-TR-FIN
'I forgot to hang clothes' (2.15.53)[5]

All of the matrix verbs above are transitive, with an inanimate object, evidenced by the transitivity marker *-ɖ* after the perfective aspect marker. The object in these cases is most likely the complement clause itself. As we saw in section 2.2 with the complements with *ci*, the complement subject is not also copied as object of the matrix clause.

It is also possible for *mente* to appear on its own, without an overt matrix verb:

(29) *okon-re-m-a coke? okon-re-m-a coke? mente*
where-LOC-2SG-FIN frog? where-LOC-2SG-FIN frog? COMP
'Where are you frog? where are you frog? (20081219JT:22)

In examples like (29), *mente* seems to be acting as the matrix verb itself, as there is no finite verb in these clauses. We might call it a quotative in these examples.

Both *mente* and *ci* function as complementizers in Ho. Both appear with finite complement clauses. The most striking difference, however, is in word order. *Ci* precedes the complement clause while *mente* follows it. Throughout India and other parts of South Asia, many languages, particularly Indo-Aryan languages, have two complementizers that follow these same two patterns.

Complementizers (like *mente*) that follow the complement usually come from a word meaning 'say', e.g., *bole* in Bengali or *ani* in Telugu (Bayer 2001). Bayer notes that these are traditionally called quotatives because they set the preceding discourse in quotes (2001:13).

The second type of complementizer always precedes the complement clause, and follows the matrix verb. Bayer calls these "initial complementizers". Ho *ci* and its Hindi equivalent *ki* are of this type. Bayer notes that across the Indo-European family, the initial complementizers are often lexically identical with a demonstrative pronoun such as 'what' or a relativizer such as 'which' (2001:13). The lexical origins of the initial complementizer in South Asian languages are less clear but Bayer suggests that they also come from what he calls "operators". Both Hindi *ki* and Bengali *ɟe* are also relativizers. The Ho complementizer *ci* is likely a loan from the Hindi *ki* and it is also used as a question particle in Ho. (Deeney also reports some use of *ci* as a relativizer among bilingual speakers (2002:92.))

Bayer finds that for Bengali, there is some functional overlap in the initial and final complementizers. However, the final complementizer (*bole* in Bengali) has more uses than the initial complementizer. As we will see in the next section, the final complementizer *mente* in Ho can also be used with reason adverbials.

[4] In section 3.2 below I will argue that the allative suffix *-te* is becoming an infinitive marker in Ho.
[5] *Riːɲ* 'forget' can also take a bare verb construction; see section 3.3.

3.2.1. Mente *as a reason adverbial*

In addition to its use as a complementizer, *mente* can also be used with a cause phrase. As we see in example (30), *mente* follows the cause phrase, in this case *enko buginteko taiu?kako* "that they stay well".

(30)	*gõwa-bonga*	*bonga-i-je=bu,*	*gõwa-re*	*uri?*	
	cow.shed-spirit	worship-3SG-FIN=1PL.INCL	cow.shed-LOC	cow	
	merom-ko	*ciken-ko=bu*	*em-ko-wa*	*enko*	
	goat-PL	what-PL=1PL.INCL	put-3PL-FIN	that.ANIM:3PL	
	bugin-te=ko	*tai-u?-ka=ko*	*mente*		
	good-ALL=3PL	stay-MID-OPT=3PL	COMP		

'we worship to the cattle shed god, so that the cows and goats and whatever we put in the cow shed will be healthy' (20110301KB:38)

(31)	*aliŋ*	*da?=liŋ*	*agu-le-ɖ-a*	*aben=liŋ*	*em-a-ben-a*
	1DL.EXCL	water=1DL.EXCL	bring-PFV-TR-FIN	2DL=1DL.EXCL	give-APP-2DL-FIN
	mente	*mendo*	*ka=liŋ*	*em-a-ɖ-ben-a*	
	COMP	but	neg=2DL.EXC	give-APP-TR-2DL-FIN	

'we brought the water to give to you but we haven't given it yet' (2.7.32)

In examples (30) and (31) *mente* functions to link an adverbial clause to the main clause as a kind of reason marker (like because).

The grammaticalization of quotative verbs into both complementizers and reason markers has been noted in many languages across the world (e.g., Lord 1976; Saxena 1988; Hopper and Traugott 2003:13-15; Klamer 2000). Saxena (1995) argues for a four stage process wherein a quotative verb first grammaticalizes to a complementizer, then to a reason/purpose marker, then to a conditional, and finally to a comparative marker. Ho seems to be at stage two of this process; *mente* is only used as a complementizer and a reason marker.

3. Non-finite complement clauses

We saw in section 2 that the finite complement clauses of perception-cognition-utterance verbs take the same form as regular finite main clauses in Ho. The tense/aspect marking, object marking and finite marker all appear as they would in a basic clause without a matrix verb. In this section we look at the structure of reduced complements i.e., non-finite complement clauses.

In Ho, the matrix verbs which take some type of non-finite complements are all (so-called) modality verbs. As predicted by Givón's scale of event integration (2001:55), modality verbs, because they code the aspect or mode of the event or state encoded in the complement clause, typically have a close semantic bond with the complement predication. The matrix and complement verbs together refer to a single event, i.e., they refer to the same place and time. In addition, the subject of the complement verb is normally co-referential with the subject of the modality verb. Givón predicts that this semantic closeness will be reflected in the syntax and that the matrix verbs of this type will be more likely to have non-finite or nominalized complements. We will see that, in Ho, non-finite complements of modality verbs can be nominalizations, infinitives or bare verbs.

3.1 Nominalization

Five matrix verbs in Ho take a nominalized complement: these are *ete?* 'begin', *nam* 'try', *dorkar* 'need', *ajum* 'hear' and *paisela* 'decide'. In the nominalized complement construction, the nominalizing suffix *-teja?* is simply suffixed to the complement verb. No tense/aspect or transitivity suffixes appear in the nominalized complement; but an object suffix can follow a transitive complement verb, and precede *-teja?.*

First, I will show that *-teja?* is in fact a nominalizer. *-Teja?* suffixes to a variety of lexemes which then function as nouns. In the following examples, we see *-teja?* suffixed to a property concept (32), to an action (33), and to a kind of incorporated action-object compound (34).

(32) *...roː-teja?=do* *ka=ge* *berel* *ruːm* *sakam-re* *roː-teja?=do*
...dry-NMLZ=FOC NEG=EMPH unripe rum leaf-LOC dry-NMLZ=FOC
ka=ge *bai-u?-wa*
neg=EMPH make-MID-FIN
'...not the dry ones, [put it] on an unripe rum leaf, the dry ones don't work'
(lit: 'aren't made') (20081107NB:20)

(33) *ente* *kiteb* *bai-je-n-re=do* *ondo?* *eto-ko-teja?*
then book make-PST.ITR-ITR-LOC=FOC and teach-3PL-NMLZ
ondo? *suvide* *bai-je-n-e,* *ajer=do* *kiteb*
and easy make-PST.ITR-ITR-FIN, before=FOC book
ka *taiken-re=do* *ɟoke* *muskil* *taikena*
NEG PST.COP-LOC=FOC little difficult PST.COP
'after the book was made, teaching them was made easier, before, when there was no book, it was a little difficult' (20110413DSP:139)

(34) *ginil-re* *liɟe?-ko-haka-teja?* *kilum-eke-n-a*
wall-LOC cloth-PL-hang-NMLZ nail-PRF-ITR-FIN
'the clothes hooks are nailed on the wall' (2.121.50)

In all cases, the *-teya?* word has the pragmatic function of referring to some entity, which is the prototypical function of a noun.

As we will see in the following examples, a verb nominalized with *-teya?* can function as a complement to certain modality verbs, chiefly *nam* 'try' and *dorkar* 'need, necessary'. In examples (35) and (36) the subject of both the matrix verb and the complement verb is the same and the complement verb is intransitive.

(35) *Soba* *paɽaw-teja?* *nam-tan-a*
Soba study-NMLZ try-IPFV-FIN
'Soba is trying to study' (1.214.21)

(36) *aɲ* *owa?-te* *huɟu?-teja?* *dorkar-a*
1SG house-ALL come-NMLZ need-FIN
'I need to come home' (1.223.29)

If the complement verb has an object (and the subjects of both verbs are the same), the object suffix appears between the complement verb root and the nominalizing suffix. This is true for both animate (37) and inanimate (38) objects.

(37) *ente kule=do* *ɟom-iɲ-teja?* *nam-tan-a*
then tiger=FOC eat-1SG-NMLZ try-IPFV-FIN
'then the tiger is trying to eat me' (20110210BCc:52)

(38) *Dobro* *kiteb=e?* *paɽaw-e-teja?=e?* *nam-tan-a*
Dobro book=3SG read-INAN.OBJ-NMLZ=3SG try-IPFV-FIN
'He is trying to read a book' (1.226.6)

If the subject of the complement verb is different from the subject of the matrix verb, there are two possible constructions. The first is the same as we saw above. The subject of the complement verb is simply inserted before the complement verb:

(39) *aɲ* *akiɲ=kiɲ* *huɟu?-teja?=ɲ* *dorkar-o?-tan-a=ɲ*
1SG 3DL=3DL come-NMLZ=1SGL need-MID-IPFV-FIN=1SG
'I need them two to come' (1.225.35)

Note that the subject clitics are more likely to appear in clauses where the complement and the matrix verb have different subjects, as in (39). In example (37) above, when we see the same subject in matrix and complement clauses, the subject clitic was omitted.

The second option is to mark the subject of the complement verb as a kind of possessor, with the place suffix *-taʔ*.[6]

(40) *aŋ* *am-taʔ=ŋ* *huɟuʔ-tejaʔ=ŋ* *dorkar-oʔ-tan-a=ŋ*
1SG 2SG-place=3PL come-NMLZ=1SG need-MID-IPFV-FIN=1SG
'I need you to come' (1.225.40)

Both alternatives are considered grammatical by native speakers. With different subjects and a transitive complement verb, the causative suffix *-ici* must be introduced into the nominalized verbal complement:

(41) *ako* *am-ke* *liɟeʔ-ko=ko* *haka-ici-m-tejaʔ=ko* *dorkar-oʔ-tan-a*
3PL 2SG-ACC cloth-PL=3PL hang-CAUS-2SG-NMLZ=3PL need-MID-IPFV-FIN
'they need you to hang the clothes' (1.228.4)

In sentence (41) we see that the (second person singular) subject of the complement verb, which is also object of the matrix verb (here marked with *-ke*), is marked as the causee inside the nominalization. A suffix referencing the animate causee goes into the object slot.

If there is a transitive complement verb, different subjects and an animate object, then the subject of the complement clause is marked as possessor and the animate NP object of the complement verb is marked with the object case suffix (by those who use it, see section 1.3).

(42) *ako* *am-ke* *Dobro* *ɟoton-ici-m-tejaʔ-ko=ko* *dorkar-oʔ-tan-a*
3PL 2SG-ACC Dobro look.after-CAUS-2SG-NMLZ-PL=3PL need-MID-IPFV-FIN
'they need Dobro to look after you (more than once)' (2.229.7)

It is interesting that when there is an animate object of the complement verb, that object gets marked as the causee in the nominalized complement verb, rather than the agent, as we saw above in (41).

In sum, in this section we have seen that a nominalized complement clause can take an object suffix, but tense and aspect is usually marked on the matrix verb. We also saw that when the complement subject is different from the matrix subject, the causative suffix *-ici* follows the complement verb root.

3.2 Infinitives with -te

Another type of reduced complement construction in Ho is the infinitive construction. The infinitive construction seems to be modeled on a purposive construction that is used with *huɟuʔ* 'come' and *sen* 'go' as matrix verbs (illustrated in (47)). I will argue below that the allative marker *-te* which is used in such purposive clauses is further developing into an infinitive marker, and is used with certain complement taking verbs.

The *-te* infinitive construction is mainly used with one verb, *hoba* 'happen, take place'. When *hoba* appears in a middle construction and with an infinitive complement, it takes on an obligation sense and is usually translated with something like 'must', as in the following examples. It seems that speakers have reanalyzed the *-te hoba-oʔ* construction so that synchronically it functions more like an auxiliary construction.

(43) *ka,* *ka=eʔ* *ɟom-iŋ-te* *hoba-oʔ-wa*
NEG NEG=3SG eat-1SG-ALL must-MID-FIN
'no, he mustn't eat me' (20110210BCc:34)

Note that, as we saw in nominalized complements above, the object of the complement clause appears between the verb root and -te. We can also insert a recipient object if there is an applicative marker (44) or an inanimate object marker *-e* (45) (whether it refers to an actual object or not, see section 1.3 and example (11) above).

[6] To indicate possession, the *-taʔ* suffix is affixed to a possessor with the locative *-re* as in:
Dobro-taʔ-re *miyaɖ* *kiteb* *menaʔ*
Dobro-place-LOC one book LOC.COP
'Dobro has a book' (3.49.68)

(44) *nama liɟeʔ nama sutui=do kiriŋ-e-i-te hoba-oʔ-wa*
new clothes new shirt=FOC buy-APP-3SG-ALL must-MID-FIN
'new clothes and shirts must be bought for him/we must buy new clothes and shirts for him' (20081213MSc:95)

(45) *aliŋ=do=ŋ raʔ-e-te=ge hoba-oʔ-wa*
1DL.EXCL=FOC=1SG cry-INAN.OBJ-ALL=EMPH must-MID-FIN
'I must cry' (20081108AB:17)[7]

In contrast to the nominalized complement construction (section 3.1), the subject clitic in an infinitive complement just occurs once, before the complement verb, suggesting that the complement and matrix verb are treated as a single unit. More evidence for treating the infinitive and matrix predications as a single unit is the fact that the negative particle *ka* appears before the complement verb in (43). If the infinitive verb with ***hoba-oʔ*** has been reanalyzed as a single unit, it may be better synchronically to treat the construction as an auxiliary formation with ***hoba-oʔ*** meaning 'must'.

Haspelmath (1989) shows that a shift from allative to purposive and then to infinitive function is a common grammaticalization path. Sentence (46) shows the original, allative use of -te in Ho, while sentence (47) shows how it has come to be used in purposive clauses.[8]

(46) *aŋ gaɽa-te iɖi-atuː-ŋ-pe*
1SG river-ALL take-leave-1SG-IMP.2PL
'take me to the river and leave me' (20081107RCBb:38)

(47) *ol-te research-noʔ-leka-te huɟuʔ-le-n-taikena*
write-ALL research-little-like-ALL come-PFV-ITR-PST.COP
'he came to write, to do like a little research' (20110413DSP:49)

In Ho, only purposives with 'come' and 'go' use *-te*, as in (47), thus preserving a sense of direction in these sentences.

The next step in the grammaticalization of an allative to an infinitive is for the purposive adposition to be used with complements. Haspelmath (1989) shows that purposive clauses are first used as irrealis complement clauses, and then as what he calls 'realis-non-factive', and finally 'realis-factive' complements. In many languages, the original allative has not grammaticalized to be used for all types of complements.

In Ho, the purposive *-te* has only weakly grammaticalized to an infinitive. It is primarily used with *hoba* 'must', a deontic modality, which takes irrealis and non-implicative complements.

The second interesting fact about the construction involving *hoba* plus the infinitive is that *hoba* always appears with the middle suffix *-oʔ*. Due to the fact that obligation is normally 'externally imposed', source constructions for obligation modals are often passive-like in structure (Bybee, Perkins and Pagliuca 1994:185).

In this section we have seen that Ho is developing an infinitive construction which is used to mark complements of ***hoba-oʔ-wa*** 'must'. The fact that the infinitive verb with ***hoba-oʔ*** is treated as a single unit suggests that it is being further reanalyzed as an auxiliary construction. As in many languages, the infinitive suffix comes from the allative marker.

3.3 Bare verb

The last type of non-finite complement is the bare verb strategy. In these clauses, the complement verb is simply bare, i.e., there is no infinitive or nominalization marker. The verb is also not inflected for tense or aspect and the transitive verbs have no object suffixes. The following examples show the bare verb complements with matrix ***ada*** 'know' (48), ***riːŋ*** 'forget' (49) and ***eteʔ*** 'begin' (50).

[7] The first person dual pronoun is often used in place of the singular pronoun as an expression of politeness.
[8] Note that there are other uses of *-te* in Ho, such as a manner adverbial and instrumental marker.

(48) *aɲ ojar=eɲ ada-a-n-a*
1SG SWIM=1SG know-APP-RFLX-FIN
'I know how to swim' (1.15.60)

(49) *aɲ sim-ko goeʔ=ɲ riːɲ-te-ɖ-a*
1SG chicken-PL kill=1SG forget-PFV-TR-FIN
'I forgot to kill the chickens' (2.21.15)

(50) *baba-ko ɟom=ko eteʔ-ke-ɖ-a*
paddy-PL eat=PL begin-PFV-TR-FIN
'they began to eat the paddy' (186.7)

The fact that the subject marker must precede the matrix verb, as in the above examples, is evidence that the matrix verb is in fact the main verb. Note, however, that there is no object marker on the complement verb, even when there is an animate object (as in (49)). All of the matrix verbs that take the bare verb strategy share subjects with their complement verb. The fact that the two verbs share subjects seems to allow the reduced, non-finite complement in this case.

4. Summary & conclusions

Table 2 summarizes the complementation constructions co-occurring with matrix complement taking verbs in Ho.

The matrix verbs at the top of the table ('say', 'know', 'see', 'think') all express semantics of perception, cognition and utterance. As might be expected their complements are fully finite i.e., the complements take the same form as regular non-embedded clauses. Some are introduced by the complementizers ci and mente, but neither verb of saying (*meta* or *men*) needs a complementizer.

In section 2, we saw that Ho has both types of complementizers found across South Asia. *Ci* is the Indo-Aryan-type complementizer. It is homophonous with the question particle *ci* and precedes the complement clause. We saw that *ada* 'know' and *nel* 'see' can both take *ci* with a finite complement. The second complementizer is *mente*, which is from the verb *men* 'say' with the allative/infinitive marker *-te*. Complementizers that come from a word for 'say' like *mente* are sometimes also called quotatives; these are especially common in the Dravidian languages of South Asia, but they also exist in many Indo-Aryan languages. Mente follows the finite complement clause and is used with the complements of *uɽuʔ* 'think' and *riːɲ* 'forget'.

Table 2: Summary of complementation strategies in Ho

Matrix Verb	English	Complement type					
		finite	ci+	+mente	NMLZ	*-te* infin.	bare verb
meta	'say to'	X					
men	'say'	X					
ada	'know'	X	X				
nel	'see'	X	X				
uɽuʔ	'think'			X			
riːɲ	'forget'			X (ditr)			X
paisela	'decide'				X		
ayum	'hear'				X		
nam	'try'				X		
dorkar	'need'				X		
eʈeʔ	'start'				X		
hoba	must'					X	
ada-a	'know how'						X

There are three types of reduced, non-finite complement constructions in Ho. In section 3 we saw complements that are nominalized, complements with infinitive marker *-te* and those that are simply a bare verb. All the matrix verbs that take this type of reduced complement describe some kind of modal or aspectual notion, such as 'try' or 'need'. As Givón predicts, modality verbs, with their close semantic bond to the complement verb, are also more syntactically integrated with the complement verb (Givón 2001).

We can conclude that complement taking verbs in Ho support Givón's claims about the isomorphism between the syntax and semantics of complement taking verbs. PCU verbs, such as

men 'say' tend to take fully finite complements while modal, aspectual and manipulation verbs take non-finite complements.

Abbreviations

1	1st person	EMPH	emphatic	MID	middle
2	2nd person	EXCL	exclusive	NEG	negative
3	3rd person	FIN	finite	NMLZ	nominalizer
ACC	accusative	FOC	focus	OBJ	object
ALL	allative	GEN	genitive	OPT	optative
ANIM	animate	IMP	imperative	PFV	perfective
CAUS	causative	INAN	inanimate	PL	plural
COMP	complementizer	INCL	inclusive	PRF	perfect
COP	copula	IPFV	imperfective	RFLX	reflexive
DL	dual	ITR	intransitive	SG	singular
		LOC	locative	TR	transitive

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