Complementation in Caodeng rGyalrong*

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This work aims at systematically exploring the intricate system of verbal complementation in a major dialect of the rGyalrong language of northwestern Sichuan. Both sentence-like and reduced clauses in bi-clausal as well as monoclusal patterns are employed by the language to implement its repertoire of complementation syntax, comprising a total of four true complement-clause types and four complementation strategies. The distribution of these abundant grammatical devices depends very much on the semantic types of predicates they are associated with, and accords to a large extent with the typologically expected correlations between semantic integration and the likelihood for clausal reduction.

Key words: Sino-Tibetan, rGyalrong, complement clauses, complementation strategies

1. Background

In the typological literature, the term ‘(verbal) complementation’ commonly refers to ‘the syntactic situation that arises when a notional sentence or predication is an

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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>first person</td>
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<tr>
<td>2</td>
<td>second person</td>
</tr>
<tr>
<td>ABS</td>
<td>absolutive</td>
</tr>
<tr>
<td>ADV</td>
<td>adverbial marker</td>
</tr>
<tr>
<td>ANA</td>
<td>anaphoric pronoun</td>
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<tr>
<td>AND</td>
<td>andative</td>
</tr>
<tr>
<td>CAUS</td>
<td>causative</td>
</tr>
<tr>
<td>COMP</td>
<td>complementizer</td>
</tr>
<tr>
<td>CONT</td>
<td>continuous</td>
</tr>
<tr>
<td>CONV</td>
<td>converb</td>
</tr>
<tr>
<td>DAT</td>
<td>dative</td>
</tr>
<tr>
<td>DET</td>
<td>determiner</td>
</tr>
<tr>
<td>DL</td>
<td>dual</td>
</tr>
<tr>
<td>DM</td>
<td>discourse marker</td>
</tr>
<tr>
<td>EMPH</td>
<td>emphatic</td>
</tr>
<tr>
<td>ERG</td>
<td>ergative</td>
</tr>
<tr>
<td>GP</td>
<td>generic person</td>
</tr>
<tr>
<td>HTR</td>
<td>high transitivity</td>
</tr>
</tbody>
</table>
argument of a predicate’ (Noonan 2007:52-150). This sense of the term is also embodied in Horie and Comrie’s definition of complementation as ‘predication manifested in argument slots’ (Horie & Comrie 2000:1). As pointed out by Cristofaro (1998:18), the limit of such definitions is that ‘they relate complement constructions to the notion of syntactic embedding, and not all languages code complement relations by means of embedded structures’. She therefore offers a broadened definition of a complement relation as one that ‘links two states of affairs one of which, namely the main, or pivotal one, entails that another one, the dependent one, is referred to’ (1998:17). In a similar vein, Dixon (2006a:1-48) defines complementation as involving ‘grammatical processes for relating the action or state described by one verb from an unrestricted set (U) to an argument of another verb from a restricted set (R)’.

In Dixon’s framework, the two verbs can be linked by means of a true complement clause, characterized in the main by its internal clausal structure and its function as a core argument of the higher clause, as seen in the following. (True complement clauses are hereafter enclosed within angular brackets):

(1) Dolakha Newar (Tibeto-Burman, Nepal, Genetti 2007:410)

\[ jin_a < \tilde{a}mun, puj\tilde{a}_o yep-a_o \ sor-ag_i \]

1SG:ERG 3SG:ERG ceremony do-NR2 watch-1SG:PRES

‘I watch him worship (sb or sth).’

The Dolakha Newar ‘simple nominalized clause’ in (1), which is one of four complement clause types in that language, plays an O function in the transitive clause headed by the complement-taking predicate ‘watch’. Notice that (a) the matrix clause is

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1 However, Noonan (2007:75) still includes within his complement types paratactic, participial, and other structures serving no argument function in the matrix clause, despite his ‘argument-of-a-predicate’ definition of verbal complementation.

2 Two other criteria are invoked by Dixon for recognizing a structure as a complement clause— that it must refer to a proposition, and that it must function as a core argument for certain cross-linguistically typical complement-taking predicates (CTPS) such as ‘see’, ‘hear’, ‘know’, ‘believe’, and ‘like’ (Dixon 2006a:15-20).
overtly transitive with an ergative-marked A argument, and (b) the nominalized object complement clause displays its normal argument structure and case assignment—evidence that we are dealing with a true complement clause.

Alternatively, the two linked verbs may be related to each other via a complementation strategy, a non-embedding structure serving a comparable semantic function, as exemplified by the paratactic structure in Lango (2a) and the serial verb construction in Dyirbal (2b):

(2) a. Lango (Western Nilotic, Noonan 2007:65)

\[\text{Dákô òkkòbì icš òkwɔ́rɔ́ kál}\]

woman told.3SG:DAT man sifted.3SG millet

‘The woman told the man to sift millet (and he did) (lit. The woman said it to the man, he sifted millet).’

b. Dyirbal (Pama-Nyungan, Australia, Dixon 2006b:277)

\[\text{bayi, gajilmbarri-nyu yanu}\]

there:ABS:MASC pretend-PAST go:PAST

‘He pretended to go (lit. He pretended-went).’

The distinction drawn here is significant for the cross-linguistic applicability of the term ‘complementation’ in linguistic typology, especially in view of languages like Dyirbal which fall back entirely on complementation strategies to encode complementation (Dixon 2006b). Maintaining the distinction is also important for a full understanding of complementation morphosyntax in languages that make use of both structural types, a case in point being rGyalrong, a morphologically complex Tibeto-Burman language of northwestern Sichuan.

This paper aims to provide a comprehensive study of the rich array of both complement clauses and complementation strategies in the Caodeng dialect of rGyalrong.

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3 Cristofaro (2003:95-98)’s functional definition of complement relations also encompasses both embedded and non-embedded structures, roughly paralleling Dixon’s complement clauses and complementation strategies.

4 rGyalrong is composed of at least four language-like ‘dialects’: Situ, Chabao (Written Tibetan <ja.phug>), Showu, and Caodeng (Written Tibetan <tsho bdun>). rGyalrong coheres with two closely related languages Horpa and Lavrung to form a distinct rGyalrongic cluster under the Qiangic branch in Tibeto-Burman, as proposed in Sun (2000a, 2000b). Caodeng rGyalrong is spoken by around 3,000 agriculturalist Tibetans residing in seven villages within Caodeng Township, Ma’er kang County, Aba Prefecture, Sichuan Province. The Caodeng data in this paper, representing the speech of Gaqiuli (qreʰweriʔ) village, are based on my extended fieldwork in Sichuan.

5 See also Genetti et al. (2008) and Jacques (2008:§10) for more restricted treatments of the
Noonan’s elaborate semantic classification of complement-taking predicates will be followed in this paper (Noonan 2007:§3.2).

The paper is organized as follows. Section 2 gives a typological profile of Caodeng morphosyntax, highlighting the various nominalization patterns that play an important role in the expression of complementation. In the main body of this paper, I analyze in turn the structures and meanings of the eight complementation structures attested in the language, including four true complement clause types (§3), and four complementation strategies (§4). The typological implications of our findings are highlighted in the concluding section.

2. Typological profile

Caodeng morphosyntax is characterized by strong head-marking tendencies, agglutination with some degree of fusion, preference for prefixes over suffixes, and a largely head-final word order with pragmatically determined variations.

The major word classes are nouns, verbs, ideophones, and particles. Adjectives do not form a distinct lexical category, but are a subclass of stative verbs. Many (but not all) nouns take an ‘absolutive’7 nominal prefix to-/tv-, which is dropped when the noun occurs in (inalienably) possessed or derived forms. Nominal inflectional categories are number, case, and (head-marked) possession. Dependent case marking is not well developed. The two basic cases, the ergative-instrumental and the locational cases, are subject to ellipsis when their absence does not cause ambiguity. Verbs undergo abundant derivational processes via prefixal morphology to alter lexical categories or manipulate argument structure. With the exception of a small number of labile verbs, verbs are rigidly subclassified as either transitive or intransitive. Transitivity adjustment proceeds via productive valence-changing derivation. Verb structure is highly synthetic. The inflectional categories coded on the verb include person-number, polarity, direction (direct vs. inverse), topography-based spatial orientation, transitivity, tense-aspect, and topic in the Situ and Chabao dialects, respectively.

6 Certain concepts frequently expressed via syntactic complementation are coded by derivational morphology in Caodeng. A prime example is causation, which is mainly expressed by valence-increasing morphology. However, certain causative meanings are coded by syntactic means, see §3.2 and §4.2.

7 This term is borrowed from Uto-Aztecan linguistics where it denotes a nominal suffix with a morphological function of indicating a noun’s ‘independent’ status when it is un-possessed and un-pluralized.

8 This is a generalized case form which, depending on context, may be construed as referring to location, source, or destination.
evidentiality. Person marking follows an empathy-based hierarchical system. Non-finite verb forms are common in dependent clauses.

Despite its weakly ergative case marking, Caodeng exhibits a predominantly accusative alignment of grammatical relations, with an S/A subject and a primitive object (Haspelmath 2005), the latter uniting the patient of mono-transitive verbs and the recipient of ditransitive verbs. The subject relation receives particularly salient representation in the morphosyntax, exhibiting a number of special coding and behavioral properties.

Caodeng is a rather consistent verb-final language. Recipients normally precede patients, and both follow actors barring object topicalization or inverse scenarios. Temporal adverbials precede locational ones. At the clausal level, sequences of finite clauses are connected loosely by sequential particles. Events in immediate temporal sequence may be denoted by verb sequences without any connective morphology. Clause combining involves mono-clausal as well as bi-clausal (both coordinating and subordinating) types.

As elsewhere in the Tibeto-Burman family (cf. Matisoff 1972, Noonan 1997, Genetti et al. 2008), deverbal nominalization occupies a central space in Caodeng syntax. Many distinct types of nominalization exist, differing in scope (lexical vs. clausal) and extent of deverbalization. With the exception of non-productive verbal nouns in to-/tw- (e.g. to-markat ‘theft’, from verb root marku), all nominalizing processes in the language have a clausal scope, with varying degrees of retention of clausal structure. Clausal nominalization may take either a non-finite or (partly) finite form. Included in the first type are purposives in ko-, participant nominals in ko- (targeting S/A subjects), kv- (targeting objects) and sv- (targeting oblique roles) (e.g. bri o-ko-marku ‘thief of horses’), action/state nominalization in kv-[+HUMAN] and ko-[–HUMAN] (e.g. bri kv-marku ‘stealing horses’), and infinitival nominalization in kv- (with neutralization of the distinction [+HUMAN]). The participant and purposive types display a more advanced degree of nominalization in that they require the representation of the clausal subject (or object, in the absence of an overt subject) as a possessive attribute (e.g. bri o-st-markui? ‘place at which one steals/stole horses’, bri o-ko-marku kw-ki ‘come in order to steal horses’). The finite nominalization type involves a single (partly) finite verb form nominalized uniformly by ko- (e.g. for? sonem bri to-ko-markui? = na? ‘that Sonam stole horses yesterday’). Clausal subordination makes extensive use of purposive, participant, infinitive, and finite nominalizations in the formation of relative, adverbial, as well as complement clauses. The characteristics of these different nominalization types are summarized in Table 1:

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9 Action/state, or gerund, nominals are the citation forms of verbs in rGyalrong, e.g. kv-pe ‘do’, ko-ma?bjem? ‘fly’.
Table 1: Caodeng nominalization types and nominalizing prefixes

<table>
<thead>
<tr>
<th>NMLZ TYPE</th>
<th>SCOPE</th>
<th>FINITENESS</th>
<th>ARG CODING</th>
<th>NMLZ PREFIXES</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVERBAL NOUN</td>
<td>lexical</td>
<td>non-finite</td>
<td>none</td>
<td>tə-/tə-</td>
</tr>
<tr>
<td>PURPOSIVE</td>
<td>clausal</td>
<td>non-finite</td>
<td>possessor</td>
<td>kə-</td>
</tr>
<tr>
<td>PARTICIPANT</td>
<td>clausal</td>
<td>non-finite</td>
<td>possessor</td>
<td>(subject) kə-; (object) kv-; (oblique) sv-</td>
</tr>
<tr>
<td>INFINITIVE</td>
<td>clausal</td>
<td>non-finite</td>
<td>normal(^{10})</td>
<td>kv-</td>
</tr>
<tr>
<td>ACTION/STATE</td>
<td>clausal</td>
<td>non-finite</td>
<td>normal</td>
<td>[+Human] kv-; [-Human] kə-</td>
</tr>
<tr>
<td>FINITE</td>
<td>clausal</td>
<td>finite</td>
<td>normal</td>
<td>kə-</td>
</tr>
</tbody>
</table>

3. Complement clause types

A proper complement clause must retain crucial internal characteristics of a clause, and must serve an argument function inside a higher clause. Four structures meeting these two fundamental criteria are found in Caodeng: a) sentence-like (S-like) clauses, b) finite nominalized clauses, c) irrealis clauses, and d) infinitival clauses.

Evidence that these are all true complement clauses includes: a) intact internal clausal structure despite diminished inflectional categories in the nominalized types,\(^{11}\) b) ergative case marking on the clauses when in A function, and c) transitive marking on the matrix verb\(^{12}\) when in O function. The first two complement clause types occur in all core argument roles, the infinitival type is attested with S and O functions, while the irrealis type only fills the O slot of transitive matrix verbs.

3.1 S-like clauses

S-like clauses are identical to independent declarative clauses in argument structure and verb inflection. They can optionally take an enclitic complementizer = nəʔ or = tsəʔ.\(^{13}\)

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\(^{10}\) ‘Normal’ here means ‘as in an independent declarative sentence’.

\(^{11}\) They thus differ from what Noonan (2007:70) calls ‘nominalized complements’, which have the internal structure of noun phrases.

\(^{12}\) This is shown most clearly in the continuative aspects where the high-transitivity prefix nəv- occurs instead of the low-transitivity təv-, and in the perfective and past imperfective where the respective aspectual prefixes must undergo shift to the transitivity-marking vocalism -e- when the matrix subject is third person.

\(^{13}\) These complementizers never occur with utterance predicates, and seldom do with complement clauses in O function. They actually have a more general function as clausal subordinators.
Among other things, the S-like clause type occurs in the subject complements to many impersonal verbs, including modal (e.g. kə-reʔ ‘be necessary’, kə-tʃūt ~ kə-lɔʔ ‘be obligatory’, joʔ ‘be allowed’), propositional attitude (e.g. kə-taʔ ‘be certain’, kə-ʃɔʔ ‘be as if’), and commentative (e.g. kə-vde ‘be good’, kə-tʃʰozʔ ‘be the rule or accepted way or belief’) predicates. Some examples are:

(3)  qʰoʔ \(< ō-ste-z ne-sontev>_{s}\)
SEQ 3SG:POSS-where.sth.is=LOC PFV:TR-lay.down\textsubscript{14}
\begin{align*}
\text{ne-re} & =cə \\
\text{IMPVF:PST-be.necessary}_2 & =\text{MED}
\end{align*}
‘And he had to lay it down where he was (lit. It was necessary that he laid it down where it was).’

(4)  ꜄orm ꜄ɛ ꜄nt ꜄ao ꜄ʔ ꜄-nba ꜄ʔ =kə
last.night light.bulb PFV-explode\textsubscript{2}=INST
\begin{align*}
\langle \text{some t-χtuʔ-əŋ}\rangle & _{s} \text{ ne-tʃet} \\
\text{be.new PFV-buy\textsubscript{1}-1SG IMPVF:PST-be.obligatory}_2
\end{align*}
‘As the light bulb exploded last night, I had to buy a new one.’

(5)  qʰoʔ \(< fərvʔ o-ʁúri ne-kə-weʔ?=nə?\)
SEQ Shesrab 3SG:POSS-front PFV:WEST-NMLZ:SBJ-come\textsubscript{2}=DET
\begin{align*}
tʃó =nə? & \quad \text{ne-ŋo}\rangle _{s} \quad \text{ne-tə}=cə \\
\text{ghost}=\text{DET IMPVF:PST-be.certain}_2 & =\text{MED}
\end{align*}
‘And surely, the thing which came up before Shesrab was the ghost.’

(6)  qʰoʔ  ꜄lme=kə
SEQ lama=ERG
\begin{align*}
\langle \text{kʰʒkʰoz kə-ʃyot}\rangle & _{s} \quad \text{nv-tə-cʰuʔ?=nə?}\rangle _{s} \quad \text{vde}=cə \\
\text{here INF-arrive IMPVF:PST-2-be.able\textsubscript{2}=COMP be.good}=\text{MED}
\end{align*}
‘And the lama (said), ‘It is good that you were able to get here.’

(7)  < lifli ‘ge-ʁáxtʃi=nə? ’dʒowe wi\rangle _{s} \quad \text{tʃʰoz?}
cat IMPVF-wash\textsubscript{SUB guest come be.the.rule}
‘It is believed that when cats wash (their faces) guests will come.’

The multi-functional enclitic =nəʔ (originally a distal demonstrative; cf. (nə)-nəʔ ‘that’) also serves as a determiner, an anaphoric pronoun, and a topicalizer. The alternative subordinator =təʔ also has a topicalizing function.

\textsuperscript{14} Caodeng verbs distinguish up to three stems. The first stem, or verb base, is unmarked. The second (past) and third (singular transitive non-past) stems are indicated with subscript numerals.
As the examples above show, the complement and matrix clauses may be specified for independent tense-aspect-mood markings. This turns out to correlate with crucial semantic differences when a past-imperfective matrix predicate takes a complement clause with a present, perfective, non-past imperfective, or irrealis verb form:

(8) a. \(<jusgi\> kréfí lese \(j\)v> \(s\) \(nu\)-re
    the.other.day Krashi Lhasa go \(\text{IMPFV:PST-be.necessary}_2\)
    ‘The other day Krashi had to go to Lhasa.’

b. \(<jusgi\> kréfí lese \(tɔ\)-ere> \(s\) \(nu\)-re
    the.other.day Krashi Lhasa PFV:UP-go \(\text{IMPFV:PST-be.necessary}_2\)
    ‘The other day Krashi had to go to Lhasa (and he did).’

c. \(<jusgi\> kréfí lese \(te-fv\)> \(s\) \(nu\)-re
    the.other.day Krashi Lhasa IMPFV:UP-go IMPFV:PST-be.necessary\(_2\)
    ‘The other day Krashi had to go to Lhasa (but he did not go).’

d. \(<jusgi\> kréfí lese \(v-tɔ-fv\)> \(s\) \(nu\)-re
    the.other.day Krashi Lhasa IRR-PFV:UP-go IMPFV:PST-be.necessary\(_2\)
    ‘The other day Krashi had to go to Lhasa (but he did not, against my wish).’

Example (8a), with a present-tense verb in the complement clause, means that it was necessary for Krashi to visit Lhasa, but does not specify whether he actually went or not. In (8b), the complement verb in the perfective denotes that Krashi had to go to Lhasa, and that he did make the trip. These stand in sharp contrast to the next two examples, where a non-past imperfective verb (8c) and irrealis verb (8d) in the complement clause convey counterfactuality—Krashi did not go to Lhasa although it was his obligation (8c) or the speaker’s desire (8d) that he did.

The predicate \(kɔ\)-re? ‘be necessary’ may even take a subject complement in the delayed imperative (formally expressed by the irrealis):

(9) \(<\text{feto}\> tɛge le-nlo orjanz?\)
up.there sun IMPFV-come.out when
\(jɔ\)-k\(_b\)c te-ka-sakjev? rer\(\text{rv}\)=na? 1P:POSS-house UP-NMLZ:SBJ-hide.from.view mountain=DET
\(v-tɔ-tɔ-\text{hwp}\) > \(s\) re? go?
IRR-PFV:UP-2-dig\(_3\) be.necessary be
‘The mountain up there that covers our house when the sun rises, you must go and raze it.’
Unlike \textit{kə-re}? ‘be necessary’, the commentative verbs \textit{kə-tsjaj}? ‘be fair’ and \textit{kə-zget} ‘be justified’ always select temporally predetermined complement clause in the \textit{non-past imperfective}, even when past events are predicated:

(10) \textit{<forme twwa? nɛ-tʰe-an>}_{s} nɛ-tsʰjaj=kə
\
\hspace{1cm}last.night booze IMPFV-drink\textsubscript{3-1SG} IMPFV:PST-be.fair\textsubscript{2}=INST
\
\hspace{1cm}nə-tʰi-an \hspace{1cm} \textit{fie?}
\
PVF-drink\textsubscript{2-1SG} be:EMPH
\
‘As it was fair for me to drink the booze last night, I drank it.’

(11) \textit{<tʃone=nə? vəi? sə-te-nɛmpi-an>}_{s} nə-zgët
\
\hspace{1cm}show=DET 1 SG AND-IMPFV-watch\textsubscript{1SG} IMPFV:PST-be.justified\textsubscript{2}
\
\hspace{1cm}ʃənə? mə-sə-tə-o-snɛmpi-an
\
but NEG-AND-PFV-INV-cause.to.watch\textsubscript{2-1SG}
\
‘I deserved to go and watch the show, but s/he did not let me go watch it.’

Complement clauses assuming an A-role in the matrix clause may also take this clause type. In (12) below, the complement clause ‘that I was disobedient to you in the past’ has the semantic role of a \textit{causer}, marked with the ergative \textit{=kə}, in the event denoted by the verb \textit{kə-səzədəy}? ‘cause to be painful’:

\
\hspace{1cm}formerly 1 SG=ERG 2 SG NEG-IMPFV:PST-1>2-obey\textsubscript{2}=COMP=ERG
\
\hspace{1cm}nu-sni \hspace{1cm} nə-sozədəy-an \hspace{1cm} ntor
\
2 SG:POSS-heart PFV-2-cause.to.be.painful\textsubscript{2-1SG} DM
\
‘That I was disobedient to you in the past must have hurt your heart.’

The human subject ‘I’ in the A-role complement clause above appears to be ‘raised’ (i.e. moved from a lower to a higher clause)\textsuperscript{15} to serve as controller of person agreement in the matrix verb, despite the complement clause being the notional subject in the sentence. However, the apparent ‘SBJ-SBJ raising’ may rather be due to the matrix verb undergoing ‘associative agreement’ with a high-ranking human argument\textsuperscript{16} in the lower clause—perhaps a manifestation of the ‘associative grammar’ design of Sino-Tibetan languages that tends to separate the nominal and the verbal domains (Bickel 2000).

\textsuperscript{15} Argument raising occurs if ‘the putatively raised form is semantically an argument of the complement clause but syntactically a part of the matrix clause’ (Noonan 2007:79).

An S-like complement clause can also fill an O slot of knowledge (e.g. kā-siz ‘know’, kv-sarto? ‘realize’) as well as perception (e.g. kv-fše? ‘hear’, kv-mti? ‘see’, kv-(nertṣ)xpjét ‘observe’) predicates:

(13) <təmdánə? ne-ŋtʰnəʔ qáːrtse =nəʔj畏wrotnʃəyʰbom tʰv-go>o
in.truth PFV:TR-kill₂ deer=DET single.antler.deer CONT:LTR-be₂
mə-ne-sarto =nəŋo
NEG-PFV:TR-realize₂=MED
‘He did not realize that the deer he killed was actually just a single-antler deer.’

A raising effect is again observed in (14), where the human complement subject eyiʔ ‘I’ in the complement clause <I am drawing a thangka> appears to serve an object function in the matrix clause, triggering inverse morphology (3>1) on the verb ‘is observing’.

Direct-quote complements to utterance predicates (e.g. kā-tsə ‘tell’, kv-sæmtsi? ‘inform’) are also true O-role complement clauses. This is evidenced by the overtly transitive verb and ergative-marked subject in the matrix clause exemplified below:

(15) vlme=kə o-krape nʃ-pʰa
lama=ERG 3SG:POSS-disciple 3PL:POSS-direction
<"bavlə kəmbə mə-na-to-mye-nə kómə me-vde goʔ>o
offering at.all NEG-IMP-2-take-2PL otherwise NEG-be.good be
tə-tsəʔ goʔ=cə
PFV:TR-say₂ be=MED
‘The lama said to his disciples, “Do not take any offering (from the woman) at all. Otherwise, it will be inauspicious.”’

The propositional attitude predicate kv-səsəʔi? ‘think’ conveys the speaker’s evaluation about the propositional content of the complement clause as if in a direct quote, and behaves just like an utterance predicate.

3.2 Finite nominalized clauses

This clause type is marked by a nominalizing prefix kə- and an (optional) complementizer =naʔ or =tsəʔ. The nominalized verb is inflectionally reduced. Polarity, spatial orientation, and tense-aspect distinctions are retained whereas person-number, direction (direct vs. inverse), and evidentiality\(^{19}\) markings are dropped.

The main function of the finite nominalized clause type is to provide a syntactic alternative to the afore-mentioned S-like structure in all contexts except a) with utterance predicates, which only permit S-like complements and b) with predicates which invariably take finite nominalized complements, namely the impersonal predicate kə-pe ‘(as of an event) cause (sth)’ and the pretence predicate kə-nafpəz ‘pretend (to do sth)’. Examples illustrating these two exceptional predicates are:

(17) \(qʰoʔ \; nə-rjəre \; te-sroŋ\)

SEQ 3PL:POSS-sheepfold IMPFV-guard

\(<\; kəmərkəu=scʰənoʔ \; spjəŋku \; qupeɨʔ=ruʔ \; mə-kə-wi>_{o}\)

thief=CONJ wolf dhole=PL NEG-NMLZ-come

\(te-poj \; noʔ\)

IMPFV-cause\(_3\) be

‘And (the dogs) guard their sheepfolds, and this prevents thieves, wolves, and dholes from coming.’

\(^{18}\) Propositional attitude (or cognition) predicates are often metaphoric extensions of utterance verbs (Givón 2001:53). Examples of the same markers shared between utterance and cognition predicates include the Taiwanese Mandarin complementizer shuō (literally ‘say’), Newar han-a kʰa (Genetti 2007:415-417), the Kobon quotative particle a (Cristofaro 2003:98), and the Chemehuevi quotative (məykanı (Aikhenvald 2004:51). For other clause types taken by propositional-attitude predicates, see further on.

\(^{19}\) The dependent states of affairs in subordinate clauses are non-asserted (Cristofaro 2003:§2.4.1). This is why evidential distinctions tend to be obliterated in true complement clauses.
(18) \[ \text{rewaŋ}=k\omega \ < \ \delta\text{-mpa} \ \ karda? \ \ m\omega\text{-k}\omega\text{-tʃet}>_o \ \ te\text{-najpaz}=\text{e-o} \]
\text{rabbit=ERG 3SG:POSS-eye one PFV-NMLZ-take.out}_2 \ PFV:TR-pretend\_2 MED
‘The rabbit pretended to gouge out one of its eyes.’

Consider the following nominalized clauses in S (19a), A (20a), and O (21a) roles in contrast with their S-like counterparts, repeated as (19b) through (21b). Notice in particular the lack of person markings in the nominalized versions:

(19) a. \[ <\ \text{kətél}_a \ \ \text{joyəw}?> \ \ \text{lese} \ m\omega\text{-tə-ka-we}=n\omega?>_s \]
\text{this.time 1PL Tibet NEG-PFV:UP-NMLZ-go}_2=\text{COMP}
\text{jəyú] ne-vde}?
\text{fjei}=\text{e-o}
1PL:POSS IMPFV:PST-be.good\_2 be:EMPH\_MED
b. \[ <\ \text{kətél}_a \ \ \text{joyəw}?> \ \ \text{lese} \ m\omega\text{-tə-ve}=n\omega?>_s \]
\text{this.time 1PL Tibet NEG-PFV:UP-go}_2\_1PL=\text{COMP}
\text{jəyú] ne-vde}?
\text{fjei}=\text{e-o}
1PL:POSS IMPFV:PST-be.good\_2 be:EMPH\_MED
‘It was indeed good for us not to have gone to Tibet this time.’

(20) a. \[ <c^b\text{e}?> \ \ \text{vəji}=k\omega \ \ \text{nəji}? \ m\omega\text{-n}v\text{-kə-svəji}?=n\omega?>_A = k\omega \]
\text{formerly 1SG=ERG 2SG NEG-IMPFV:PST-NMLZ-obey}_2=\text{COMP=ERG}
\text{nv-sni} \ \ \text{nə-səzdəy-əŋ} \ \ \text{ntor} \ \ 2SG:POSS-heart PFV-cause.to.be.painful\_1SG DM
b. \[ <c^b\text{e}?> \ \ \text{vəji}=k\omega \ \ \text{nəji}? \ m\omega\text{-n}v\text{-te-svəji}?=n\omega?>_A = k\omega \]
\text{formerly 1SG=ERG 2SG NEG-IMPFV:PST-1>2-obey}_2=\text{COMP=ERG}
\text{nv-sni} \ \ \text{nə-səzdəy-əŋ} \ \ \text{ntor} \ \ 2SG:POSS-heart PFV-cause.to.be.painful\_1SG DM
‘My being disobedient to you in the past must have hurt your feelings!’

(21) a. \[ \text{tələ=}k\omega \ < \ \text{vəji}? \ \ t^b\text{apsku} \ \ \text{kə-vev-ret}=n\omega?>_o \]
\text{child=ERG 1 SG thangka NMLZ-CONT:HTR-draw=COMP}
\text{t^b-o-nəɾtʃəŋpʃət-əŋ} \ \ CONT:LTR-INV-observe\_2\_1SG
b. \[ \text{tələ=}k\omega \ < \ \text{vəji}? \ \ t^b\text{apsku} \ \ \text{vev-ret-əŋ}=n\omega?>_o \]
\text{child=ERG 1 SG thangka CONT:HTR-draw\_1SG=COMP}
\text{t^b-o-nəɾtʃəŋpʃət-əŋ} \ \ CONT:LTR-INV-observe\_2\_1SG
‘The child is observing me drawing a thangka.’
3.3 Irrealis clauses

Reality status is a full-fledged inflectional category in rGyalrong (Sun 2007). The irrealis clause is a non-indicative S-like clause containing a special irrealis verb form composed of a non-past stem doubly marked by a dedicated irrealis prefix ɐ- plus a perfectivity-marking prefix. The irrealis verb form can take person-number, polarity, spatial orientation, and perfectivity inflections, but other verbal categories are suppressed. This verb form occurs in a number of cross-linguistically typical irrealis contexts, including predictive and imaginative conditionals, optatives, jussives, and postponed imperatives. The irrealis is also the requisite verb from in O-role complement clauses to desiderative predicates denoting desires, wishes, and intentions,20 such as ɐ-səsiʔ ‘want (sb to do sth)’ and ɐ-ndʐeweʔ ‘hope (for sb to do sth)’:

(22) 姣qer?=kə
1PL=ERG
<lu?mu=nə? ədʐowe nə-rtleone v-nv-poŋ>_o ne-səsi-ʃa
Lamu=DET guest 3PL:POSS-dance IRR-PFV-make IMPFV-want2-1PL
‘We wanted Lamu to dance for the guests.’

(23) kɾəʃi=kə <nəʔ v-əm-ʃi-wi-əŋ>_o ne-ŋdʐeweʔ?=cə
Krashi=ERG 1SG IRR-NEG-PFV-come-1SG IMPFV:TR-hope2=MED
‘Krashi hoped that I wouldn’t come.’

As evidenced in the examples, the matrix and complement subjects in this construction must be different. Co-reference between the higher and lower subjects would result in equi-deletion and a distinct infinitival complement. This will be the topic of the following section.

3.4 Infinitival clauses

The highly productive infinitival verb form is composed of the verb base (STEM 1) nominalized by an invariant prefix ɐ-.21 This particular verb form is termed an infinitive, in order to set it apart from the other nominalization types.22 The infinitive needs to be

20 Such predicates are non-implicative in that neither the truth nor the falsity of the complement clause is implied (Givón 1980:334).
21 Infinitives cannot be marked for any verbal categories, save for the negative (mə-), andative (ʃə-), and ventive (ə-) prefixes.
22 The infinitive verb form is also used in construction with an auxiliary verb in a mono-clausal structure (§4.3), as well as a converb (see examples (47)-(48)).
kept distinct from the formally identical patientive participant nominalization, which is a deverbal noun. Unlike patientive participant nouns, infinitives do not allow their object arguments to be represented as possessive modifiers, a fact that reveals their *verbal* properties. The example below contrasts an infinitive (24a) with a participant deverbal noun (24b):

(24) a. ṣiy? <sonem (*o-)*kv-sámtsi > o rge-ąŋ
    1SG Sonam (*3SG:POSS:OBJ-)INF-teach like-1SG
    ‘I like to teach Sonam.’

    b. sonem o-kv-sámtsi slome=ra? ṣiy? nɔʃə-ąŋ
    Sonam 3SG:POSS-NMLZ:OBJ-teach student=PL 1SG know-1SG
    ‘I know the students whom Sonam teaches.’

The infinitival clause qualifies as a true complement clause in the language. In the following example, the O-function complement clause displays a normal *clausal* structure, with the core object argument ‘new chair’ and the adjunct ‘very much’ deployed and marked in the same way as in a main clause. The infinitival clause ‘go and sit on the new chair’ here fills an O argument position in the matrix clause where the verb ‘want’ is overtly *transitive*, despite the intransitive complement-clause verb ‘sit’:

(25) ɬamu <pɛntjaŋ some=ta ʃiɛka fɔ-ɬ-ʃu-mdzu > o ne-ʃasi = ɛa
    Lamu chair be.new=top very AND-INF-sit PFV:TR-want2=MED
    ‘Lamu wanted to go and sit on the new chair very much.’

The infinitival clause occurs as O-function complements to a broad range of transitive predicates belonging to various semantic types, including modal (kv-spe ‘know how (to do sth)’), phasal (e.g. kv-(st)je? ‘begin’, kv-sɔ̃yjoy? ‘finish’, kv-sɔɔnane ‘stop’), manipulative (kv-mmeftsʰe ‘force’), desiderative (e.g. kv-sɔsi? ‘want (to do sth)’), liking (e.g. kv-rge ‘like (to do sth)’, kv-ʃe? ‘dislike (doing sth)’), knowledge (kv-jmat ‘forget (to do sth)’), and achievement (e.g. kv-noz ‘dare (do sth)’, kv-ʃbɔm ‘do sth in a flustered manner’, kv-wetfʰum ‘do sth to excess’, kv-nəʁez?’‘take turns (doing sth)’) verbs, as well as such miscellaneous verbs as kv-qor ‘help (so to do sth)’ and kv-ʃayri ‘put off (doing sth). Argument sharing is an essential feature of this usage of the infinitive clause, of both the subject control type, where main-clause and complement-

23 Thus, kv-ʃdzɛ can be either an infinitive meaning ‘eat’ or a patientive participant verbal noun meaning ‘food (that which is eaten)’.
24 The verb also means ‘think’.

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Jackson T.-S. Sun

484
clause subjects are co-referent, and object control type, where main-clause subject and complement-clause object are co-referent. Following are some examples:

(26) \( kréʃ \quad < kv-nómtʃuy> \quad o \quad ne-q^b\varepsilon \)
Krashi INF-get.up.early IMPFV:PST:TR-dislike\(^2\)
‘Krashi used to hate to get up early.’

(27) \( \textit{soldʒ} \quad < oji? \quad julet \quad kv-r^ggu> \quad o \quad te-je = cə \)
Dorje 3SG alone INF-sleep PFV:TR-begin\(_2\)=MED
‘Dorje has started to sleep by himself.’

(28) \( ko?=ni? \quad < kv^dze \quad kv-supəpe> \quad o \quad te-nrərez^z^dəz̃ \quad go? \quad this=DL \quad food \quad INF-prepare \quad PFV:TR-take.turns\(_2\)=3DL \quad be \)
‘The two of them took turns cooking meals.’

As evidenced in the sentences below, verbal categories that belong semantically to the infinitival complement verb, such as orientation marking (29) and person marking (30), are transposed onto the matrix verb:

(29) \( q^b\varepsilon? \quad eʃa? \quad < kv-n\bomb> \quad o \quad t^b\varepsilon-\textit{me}? \quad s\textit{te} \)
SEQ liquor INF-exit IMPFV:OUT-begin\(_3\) be: EMPH
‘And liquor begins to come out.’

(30) \( < kv-rge> \quad o \quad to-tw-je^z^dəz̃ \)
INF-like PFV-1>2-begin\(_2\)=2DL
‘I have begun to like you two.’

The phenomenon effectively constitutes a remedial strategy to ensure that the information loss incurred by the use of the infinitival verb form in the lower clause can be recovered on the matrix verb. This is a clear indication that the reduced complement is undergoing incorporation into the matrix clause (cf. Noonan 2007:§2.3).\(^{25}\)

The infinitival clause is also attested in S function with intransitive impersonal predicates, such as \( ko^-bət \) ‘be easy (to do sth)’, \( ko^-mda \) ‘be time (for doing sth)’ and \( ko^-grəv? \) ‘be successful (in doing sth)’:

\(^{25}\) However, the infinitive complement clause here still functions syntactically as the O argument of the transitive matrix verb. A further step in clausal incorporation would obliterate the clausal boundary, resulting in the mono-clausal infinitive-auxiliary construction, to be discussed in §4.3.
(31) nəŋʁu? te-ke-²ge = naʔ?  təmkesɔʔ? kə-toʔ = naʔ?
  shirt IMPFV-GP-wear=SUB collar NMLZ:SBJ-exist=DET
  kv-ŋʁuθɔ bêt
  INF-be.dirty be.easy
  ‘When one wears shirts, it is easy for them to get dirty where the collars are.’

(32) tɔrmókʰe = naʔ? < kv-nɔrmɛ>ₕ jɔ-mdə ŋoʔ = cə
  dusk=DET INF-rest.for.the.day PROS-be.time be=MED
  ‘At dusk, it was soon about time to rest for the day.’

Notably, a human complement-clause subject may be treated as an experiencer and coded with a possessor form in the matrix clause:

(33) < krəʃi luse kə-mdʒəl kv-fv>ₕ əyʊ nə-²ɡrəv
  Krashi Lhasa NMLZ:PUR-go.on.pilgrimage INF-go 3SG:POSS PFV-succeed₂
  ‘Krashi succeeded in going on a pilgrimage to Lhasa (lit. It was successful of Krashi to go on a pilgrimage to Lhasa).’

3.5 Interim summary

The foregoing descriptions of the structure and applications of the four attested complement clause types are summarized in the table below:

Table 2: Form and function of Caodeng complement clause types

<table>
<thead>
<tr>
<th></th>
<th>S-LIKE CLAUSE</th>
<th>FINITE NOMINALIZED CLAUSE</th>
<th>IRREALIS CLAUSE</th>
<th>INFINITIVE CLAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORMAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROPERTIES OF CTP</td>
<td>fully finite;</td>
<td>partly finite verb plus</td>
<td>non-past verb</td>
<td>non-finite; verb</td>
</tr>
<tr>
<td></td>
<td>predetermination of tense-aspect for certain predicates</td>
<td>nominalizer kə-; inflecting only for polarity, orientation, and tense-aspect</td>
<td>stem with irrealis e- and perfectivity prefix; inflecting only for person-number, polarity, orientation, perfectivity</td>
<td>base plus nominalizer kv-</td>
</tr>
<tr>
<td>COMPLEMENTIZER</td>
<td>= naʔ? or = tsə (optional)</td>
<td>= naʔ? or = tsə (optional)</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>ARGUMENT CODING</td>
<td>‘raising’ effect owing to associative agreement</td>
<td>‘raising’ effect owing to associative agreement</td>
<td>normal</td>
<td>equi-deletion of co-referent arguments</td>
</tr>
</tbody>
</table>
4. Complementation strategies

Complementation strategies are non-embedding syntactic devices for linking the meanings of a primary and a secondary verb without producing a subordinate clause occupying a matrix-clause argument position. Presented below are four such structures that are identified in the language: a) coordination, b) purposive linking, c) auxiliary verb construction, and d) serial verb construction.

4.1 Coordination

Depending on their semantics and argument structures, propositional attitude predicates in Caodeng implement complementation by different morphosyntactic devices. In the foregoing sections, we have seen impersonal propositional attitude verbs like *ko-taʔ* ‘be certain’ taking an S-like complement clause (example (5)), and another propositional attitude verb *kp-səsiʔ* ‘think’ taking an S-like direct-quote complement like an utterance verb (example (16)). The propositional-attitude verb *kp-səsiʔ* ‘think’ with an overt experiencer subject can also enter into a distinct coordinating construction featuring an emphatic copula *feʔ* and the contrastive coordinate linker *ʃəʔ* ‘but’. The following example literally means something like ‘It is (just) my thinking, but it will rain’:

(34) *nə? ne-səsiʔ-ag feʔ* ʃəʔ kāde təmu wi
1SG IMPFV-think-1SG be:EMPH but in.a.moment rain come
‘I think it is going to rain in a moment.’
Other propositional attitude predicates of this type, such as *ku-nakjɔntsʰet* ‘guess, surmise’, *ku-nsemɡen* ‘suspect’, and *mne ku-lit* ‘bet’ obligatorily select this complementation strategy to link to their proposition-content clauses:

1SG IMPFV-guess-1SG be:EMPH but 3SG Chinese be=MED
‘I guess s/he is Chinese.’

(36) fornɔr tə-kə-məʁku?=nə?
money PFV-NMLZ:SBJ-steal=DET
ne-nsemɡen-aŋ ʃie? ʃəo? kɾéʃi ʃə? ta?
IMPFV-suspect-1SG be:EMPH but Krashi be DM
‘I suspect that the one who stole the money must be Krashi.’

4.2 Purposive linking

In Caodeng, as in many languages, a special verb form occurs in a *purposive* clause with verbs of motion to indicate purpose. This purposive, or *supine*, form is composed of a verb base plus a uniform nominalizing prefix *ka-*:

(37) *mkaŋu* təo?=kə
Ka’ergu chieftain=ERG
ne-ka-ŋtʃe tʰə-səweʔ-jə ʃə?
2SG:POSS-NMLZ:PUR-kill PFV:DOWNSTREAM-INV-cause.to.come-1PL be
‘It was the Ka’ergu Chieftain who sent us downriver to kill you.’

The foregoing sentence is not an instance of complementation, since the dependent clause ‘kill you’ is semantically an *adverbial clause of purpose* rather than a notional argument in the matrix clause. Notice that in this adverbial clause, the O argument of the verb ‘kill’ is marked as a possessor on the nominalized verb.

The purposive clause type is pressed into service as a complementation strategy in combination with certain intransitive non-motion predicates to express meanings cross-linguistically often conveyed by complement clauses. Two such predicates are attested: *ku-tʃʰet* ‘be absent (from doing sth)’ and *ku-r̃intsʰə* ‘make preparations (to do sth)’. Examples are:

(38) fornʔ aŋdʒom kə-ŋtʃéŋsə me-tʃʰet =cə
yesterday Droma NMLZ:PUR-hold.potluck.party IMPFV:PST-be.absent=MED
‘Droma was absent from the potluck party yesterday.’
A number of observations are in order about these unusual predicates. First, they are overtly intransitive. This is conclusive evidence that the linked clauses do not take an argument position inside the higher clauses. Second, a transitive O argument in a linked clause is invariably represented on the nominalized verb as a possessive prefix, exactly as in the prototypical purposive example in (37). Third, given the basic meaning of the verb kə-rantsʰa 'set off, depart', it is possible to construe its complement-taking usage in a motion sense, meaning ‘set out (to do sth)’. But it is hard to conceive of any motion senses in kə-tʃʰɐt ‘be absent’, nor any plausible purposive readings in the sentences in which it occurs. Therefore, clause linkage in non-finite kə- must be regarded as a non-purposive bi-clausal strategy utilized by certain non-motion predicates to connect to other predicates for the purpose of complementation.

4.3 Auxiliary verb construction

As observed in §3.1, modal predicates in Caodeng often expect S-role complement clauses. In lieu of this bi-clausal complementation structure, certain modal predicates also link with another verb via auxiliary verb construction, in which the modal verb has grammaticalized into an auxiliary head in combination with an infinitival lexical verb (Anderson 2006:§2.2). This mono-clausal complementation strategy is illustrated below with the modal predicate kə-cʰɐʔ ‘be able’:

(40) qʰoʔ ser jôxtəno
SEQ louse than
fla kʰɪnaŋ kʊ-o-ʃʊ-sə-zYoʔ mə-ne-cʰɐʔ = cə
right.away home INF-INV-REFL-CAUS-arrive NEG-PFV-be.able2=MED
‘So (the flea) failed to make itself get home sooner than the louse.’

The complex verb here does not instantiate a bi-clausal structure as the verb mə-ne-cʰɐʔ is intransitive in form, which means that the infinitive verb phrase cannot be an O-function complement to the main verb mə-ne-cʰɐʔ.

26 For parallel cases of infinitive lexical verbs in construction with auxiliary verb heads in other Tibeto-Burman languages, see Anderson (2006:47-49).
The following sentences are additional examples of the auxiliary verb construction. In (41), the same auxiliary *k*-cʰv ‘be able’ is shown to combine with two serialized\(^{27}\) infinitive lexical verbs. Examples (42)-(43) exemplify the auxiliary usage of the impersonal modal verbs *k*-tfʲit ‘be obligatory’ and *k*-re? ‘be necessary’:\(^{28}\)

(41) \text{SEQ boulder INF-break.apart INF-remove NEG-IMPFV:PST-be.able2=MED}
\begin{align*}
\text{'He was unable to break the boulder apart and clear it away.'}
\end{align*}

(42) \text{SEQ serf=PL=ERG each-year=TOP chieftain 3SG:POSS-firewood=DET}
\begin{align*}
\text{inf-take.turns INF-bring IMPFV-be.necessary be= MED}
\end{align*}
\begin{align*}
\text{‘And in each year, the serfs must take turns bringing in firewood for the chieftain.’}
\end{align*}

(43) \text{last.night light.bulb PFV-explode2=INST}
\begin{align*}
\text{some ka-χtu nu-tʃet}
\end{align*}
\begin{align*}
\text{be.new INF-buy IMPFV:PST-be.obligatory2}
\end{align*}
\begin{align*}
\text{‘As the light bulb exploded last night, it was necessary to buy a new one.’}
\end{align*}

4.4 Serial verb construction

Two fully inflected verbs in close juncture may form a serial verb construction, that is, a complex predicate expressing various aspects of a single event without intervening markings of clausal coordination or subordination (Aikhenvald 2006:1). Verb serialization of the symmetrical type\(^{29}\) is also employed as a mono-clausal complementation strategy to produce complex verb forms whose meanings are often translatable in other languages by complement clauses, illustrated below with the achievement verb *k*-wetʃʰem ‘overdo, do sth to excess’:

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\(^{27}\) See further section on the serial verb construction strategy.

\(^{28}\) Contrast this with the alternative bi-clausal expression of the same meaning shown earlier in §3.1, where the modal verb *k*-tfʲit ‘be obligatory’ takes a sentential complement in S-function.

\(^{29}\) All the participating verbs in this major type of serial verb constructions come from unrestricted classes (Aikhenvald 2006:§3.1).
In (44), the verbal categories of tense-aspect and person are *concordantly marked* on both verbs in series (cf. Aikhenvald 2006:§4.4), which share the O argument sketfe ‘talking’.

The function of the verb serialization strategy in this language is to impart meanings related to the manner of realization with achievement and manipulation predicates, the verb kv-wetfʰem ‘overdo, do sth to excess’ being a case in point. In the following examples, a manipulation verb kv-nmeʃfʰe30 ‘force (sb to do sth)’ and an achievement predicate kv-nmeʃeʃet ‘exert oneself’ are shown to serialize with action verbs to describe the manner in which the predicated actions are performed:

(45) kréʃi smen to-nmeʃfʰeʔ-ag nɔʃiʃʰi-ag
Krashi medicine PFV-force2-1SG PFV-cause.to.drink2-1SG
‘I forced Krashi to drink medicine.’

(46) tʰove n̂e-nmeʃfet n̂e-let
sledge.hammer IMP:DOWN-exert.oneself IMP:DOWN-do
‘Swing the sledge hammer down hard!’

Encoding secondary meanings of verbal manner as finite, serialized manner verbs constitutes a syntactic alternative to expressing verbal manner via infinitival *converbs*. Examples (47)-(48) below are structures with converbs that are equivalent to (45)-(46):

(47) kréʃi smen k̂eʃʰi to-nmeʃfʰeʔ-ag
Krashi medicine CONV-cause.to.drink PFV-force2-1SG
‘I forced Krashi to drink medicine (lit. I forced Krashi, making him drink the medicine).’

30 Derived from the adverbial mefsʰe ‘by force’ via prefixation of the verbalizing prefix m(ə)-. This adverbial can occur in combination with a causative verb as a *lexical* way of expressing comparable meanings:

smen mefsʰe mə-nə-k̂eʃʰi-ag
medicine by.force NEG-IMP-2>1-cause.to.drink-1SG
‘Don’t force me to drink medicine!’
(48) tʰove kɐ-ʃʰɐ tʃʰɐ
sledge.hammer INF-exert.oneself IMP:DOWN-do
‘Swing the sledge hammer down hard (lit. Swing the sledge hammer down, exerting yourself)!’

4.5 Interim summary

Of the four complementation strategies presented in this section, coordination and purposive linking are types of clause combinations, while auxiliary verb and serial verb constructions are mono-clausal structures. The following table provides a summary comparison of the properties of these non-embedding structures:

Table 3: Properties of Caodeng complementation strategies

<table>
<thead>
<tr>
<th>Clause Type</th>
<th>Coordination</th>
<th>Purposeful Linking</th>
<th>Auxiliary Verb Construction</th>
<th>Serial Verb Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal Properties</td>
<td>bi-clausal</td>
<td>bi-clausal</td>
<td>mono-clausal</td>
<td>mono-clausal</td>
</tr>
<tr>
<td></td>
<td>full clause</td>
<td>minor clause</td>
<td>auxiliary head combining with</td>
<td>two or more linked finite verbs with concordant marking of verbal categories</td>
</tr>
<tr>
<td></td>
<td>containing</td>
<td>taking non-finite</td>
<td>infinitival lexical verb</td>
<td></td>
</tr>
<tr>
<td></td>
<td>emphatic copula</td>
<td>verb composed of</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>linked to a</td>
<td>verb base plus</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>proposition-</td>
<td>NMLZ kə-</td>
<td></td>
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<tr>
<td></td>
<td>content clause</td>
<td></td>
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<td></td>
<td>by contrastive</td>
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<tr>
<td>Argument Coding</td>
<td>normal</td>
<td>object coded as</td>
<td>normal</td>
<td>shared</td>
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<td>possessor prefix</td>
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<td></td>
<td></td>
<td>on dependent verb</td>
<td></td>
<td></td>
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<tr>
<td>Semantic Types</td>
<td>Propositional</td>
<td>kɐ-tʃʰɐ ‘be</td>
<td>Modal</td>
<td>Achievement and Manipulation predicates denoting manner</td>
</tr>
<tr>
<td>of Main Predicates</td>
<td>attitude</td>
<td>absent’;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>kɐ-rʊntsʰa ‘make preparations’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. General discussion and conclusion

rGyalrong is long noted in Sino-Tibetan for its unusual morphosyntactic complexity, with a high level of divergence across its language-like ‘dialects’.31 Its rich potential for enhancing our understanding of the encoding of complementation in human language

31 We have identified significant differences in relative clauses across the major dialects of rGyalrong (Sun & Lin, forthcoming).
remains to be fully tapped. This paper is a first attempt to adopt Dixon’s distinction between true complement clauses and other semantically equivalent grammatical devices, i.e. complementation strategies, to describe and analyze a broad range of structures for the purpose of realizing complementation in the Caodeng dialect of rGyalrong.

Clausal nominalization, in particular the (partly) finite, infinitival, and purposive types, plays a major role in the four complement clause types and four complementation strategies identified in this study, but the language also employs other grammatical means to enrich its repertoire of complementation syntax. Both mono-clausal and bi-clausal grammatical patterns occur, the latter comprising both full and reduced clause types. The Caodeng data thus offer fertile ground for testing an important set of generalizations proposed in the recent typological literature on complementation, namely the Complement-Deranking Argument Hierarchy (Cristofaro 2003:131):

(49) Modals, Phasals > Desideratives, Manipulatives > Perception > Knowledge, Propositional Attitudes, Utterance

This hierarchy is meant to account for the ordered variation in the distribution of morphosyntactic devices used to code various dependent states of affairs in complement relations. Two cross-linguistic parameters are used to gauge the extent of structural deviation of a dependent clause from an independent declarative clause: verb form and participant coding. The central idea is that the more semantically integrated the subordinate state of affairs is, the more likely it will manifest a ‘deranked’, or explicitly marked dependent verb form and special coding of its participants. The hierarchy that emerges from her cross-linguistic study predicts the likelihood for clausal reduction among the major types of CTPS, such that if deranking or special participant realization occurs at any point on the hierarchy, then it also occurs at all points to the left in the hierarchy. The CTPS near the top of the hierarchy are more likely to take a structurally reduced clause because they involve a greater degree of semantic integration (see also Noonan 2007:101).

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32 The notion of semantic integration refers to the degree to which the boundaries between two linked states of affairs are eroded. Based on this feature, the following ranking is obtained: Modals > Phasals > direct-causation Manipulatives (‘make’) > Manipulatives (‘order’) > Desideratives, Perception > (no semantic integration) Knowledge, Propositional Attitudes, Utterance (Crisotofaro 2003:122).

33 For Cristofaro, the distinctive feature of deranking is whether a particular verb form can occur in an independent declarative clause (balanced) or not (deranked).

34 E.g. unusual alignment patterns, non-expression of arguments, or coding of arguments as possessors or obliques.
To test these cross-linguistic generalizations against the Caodeng data, the distribution of the three main complement types\footnote{Leaving aside the highly restricted irrealis clause type, which complements only different-SBJ desiderative CTPS.} in the language across their predicate types are reproduced in the table below:

**Table 4: Distribution of Caodeng complement types across CTP classes**

<table>
<thead>
<tr>
<th></th>
<th>S-LIKE CLAUSE</th>
<th>FINITE NOMINALIZED CLAUSE</th>
<th>INFINITIVE CLAUSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODALS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>PHASALS</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>DESIDERATIVES (SAME SBJ)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>MANIPULATIVES</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>PERCEPTION</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>KNOWLEDGE</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>PROPOSITIONAL ATTITUDE</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>UTTERANCE</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Several observations can be made about Table 4. The Caodeng complement-clause types display *degrees of deranking*—the finite nominalized verb form is still marked for certain major verbal categories and is therefore deranked to a less extent than the infinitive, the verb form with minimal inflectional possibilities. Seen in this light, the predictions made in the Complement Deranking Hierarchy are nicely supported by the Caodeng data. Utterance predicates require the fully balanced clause type only; Knowledge, Propositional-Attitude, and Perception predicates take either a balanced or a partly deranked clause type; the predicate types further left on the hierarchy, those that entail tighter degrees of semantic integration between the linked states of affairs and sharing of participants, generally combine with the more fully deranked infinitival form. Our findings also lend confirmation to the proposed hierarchy with regard to the participant-coding parameter. Lack of participant sharing in the Knowledge, Propositional-Attitude, and Utterance predicates precludes these CTP types from accessing the infinitival complement type. Interestingly, Perception predicates, which occupy the middle position in the hierarchy, are disallowed from taking infinitival complements despite participant sharing and omission. This can be accounted for by the weaker degree of semantic integration entailed by the perception relation since perceived states of affairs take place independently of the act of perception (Cristofaro 2003:121). Modals appear to constitute a counterexample to the hierarchy, as they can apparently co-occur with all three
Complementation in Caodeng rGyalrong

complement types, including S-like clauses. Cristofaro’s class of Modals, inherited directly from Noonan (2007:137-139), is actually a rather mixed group subsuming ability and deontic predicates, the latter including uses both impersonal (holding for the relevant state of affairs as a whole) and personal (holding for an entity that must or may bring about the relevant state of affairs). The discordant data in Caodeng modal CTPS stem from the fact that all predicates of ability in this language are of the personal type, and the deontic modals belong exclusively to the impersonal type, which is prone to involving complementation in an S-like structure.

With due attention paid to both proper complement clauses and complementation strategies, our investigation is able to encompass a broader range of structural variation in the expression of complementation in the target language. We can see that the linking of states of affairs for the purpose of complementation is implemented not only by syntactic hypotaxis through the four complement-clause types and an adverbial purposive strategy, but also by coordination as well as two co-lexicalization strategies (Givón 1980:338): auxiliary-verb and serial-verb constructions. As expected, the semantically defined CTP classes play an important role in determining the selection of their complementation devices. We have seen that truth-value-dependent predicates involving overt experiencer subjects (e.g. ‘believe’) and different-subject desiderative predicates (e.g. ‘hope (for sb to do sth)’) require a distinct complementation structure each, respectively the coordinate and irrealis structures. On the other hand, achievement and manipulation predicates denoting manner of verbal actions prefer the serialization complementation strategy.

However, certain CTPS appear to display idiosyncratic behavior. It is not clear why predicates like kə-tʃʰət ‘be absent’ obligatorily select the purposive-clause linkage, or why kə-pe ‘(for an event) to cause (sth)’ and kv-nafpoz ‘pretend’ only allow complements in nominalized finite form. Nor can we explain why complements to the commentative predicates kə-tsjaŋʔ ‘be fair’ and kə-zget ‘be justified’ (but not the other predicates in this class, such as kə-vde ‘be good’) invariably take the non-past imperfective. These elusive form-function connections must therefore be registered as part of the peculiar grammatical properties of the given predicates.
References


Complementation in Caodeng rGyalrong


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本文首度針對川西北嘉戎語草登方言錯綜複雜之動詞補語句進行系統探
究。草登話補語句體系多樣性高，兼具完整與縮減子句類型以及單、雙子句
模式，總共包括四類真正補語句及四類語意功能類似之補語化策略。這些語
法構造之分布大致取決於與其搭配謂語之語意類型，且頗吻合於類型語法學
所期待之語意整合度與子句縮減度間之相互關連。

關鍵詞：漢藏語系，嘉戎語，動詞補語句，補語化策略